



PROFIT *WITH THE* **Market Profile**

Identifying Market Value
IN REAL TIME

Dr. John Keppler
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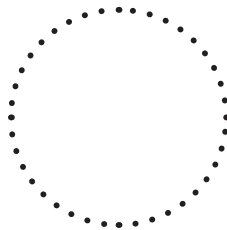
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PROFIT WITH THE MARKET PROFILE:

Identifying Market
Value in Real Time

BY DR. JOHN KEPPLER



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All Market Profile charts used in this book have been produced using MarketDelta, one of the leading Market Profile charting platforms. Some of the charting features displayed in the book may not be available on other Profile platforms. A special thanks is hereby extended to the MarketDelta team for their support and pioneering work in the field.

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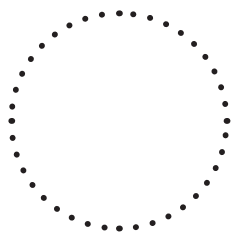
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PROFIT WITH THE MARKET PROFILE:

Identifying Market Value In Real Time

Introduction to Market Profile	vii
Chapter One: Market Profile Charts	1
Chapter Two: Value Area	29
Chapter Three: Financial Market Participants	45
Chapter Four: Auction Markets	57
Chapter Five: Analyzing the Open	77
Chapter Six: Market Profile Structures	97
Chapter Seven: Split and Merged Profiles	119
Chapter Eight: Volume and Value Tracking	143
Chapter Nine: Volume Tracking Indicator	171
Chapter Ten: Designing Profile-Based Strategies	191
Chapter Eleven: Profiles and Stocks	211
Chapter Twelve: Forex Meets the Profile	229

Challenges and Opportunities	247
About the Author	259
Glossary	261
Trading Resource Guide	277



INTRODUCTION TO MARKET PROFILE

It is important for anyone interested in learning to become a profitable investor or trader to be aware of the fact that learning to trade is a life-long journey. A smart trader is continually learning. The markets are always changing and one must learn to adapt and adjust to the changes as they occur.

It is both unreasonable and unrealistic for any individual to expect that they will ever beat or conquer the market as many misleading book titles often suggest. The goal of a successful trader is never to beat or outsmart the market. The goal of a successful trader should always be to trade in harmony with the market. Once a trader understands the landscape of the market, they can participate in market moves and profit from the activity that takes place in the market. Trading requires many different types of skills and it takes time, effort, patience, and discipline to acquire and master these skills.

Many new traders start their trading journey with a strict focus on price and price movement in the market. They quickly discover that a focus on price alone does not lead to profitable trading and that a price movement without volume to support it will quickly fizzle away.

After gaining some experience in analyzing the market, traders begin to realize that even a study of price and volume together is not sufficient to gain an understanding of the markets. Time is another major element or dimension that must be added to the equation. Different traders have different time constraints and different goals. Actually, this is often the main characteristic that distinguishes between a trader and an investor. A trader has a short-term horizon, while an investor has a longer-term perspective on the market. Consequently, all investors are traders in the market, but they have different time considerations for their investments or trades in the market. A price that may be too high for a daytrader may in fact be a bargain for a longer-term trader or investor.

As any type of trader begins to incorporate the time differential into their analysis, they are able to better understand the multi-dimensions of the market and gain a much broader perspective of the market. However, even with time, price and volume, they are still missing a critical piece of the puzzle. They are missing the main factor that drives the market; the force that is behind all major trading decisions. They are missing where value is in the market.

To profit in any market, a trader must buy low and sell at a higher price or take a short position and cover or buy back at a lower price. This cannot be accomplished without an understanding of where value is in the market. Value is the core concept behind any trade or exchange.

The trader's perception of value is the major deciding factor for any trade decision. When a large instructional buyer decides to buy an item, it is because they have determined that its current market value is lower than its future value. The opinions and perspectives about future market prices will certainly vary significantly from one

trader to another. However, they are always at the core of a trader's decisions. In the case of an intra-day trader, the future value may simply be an anticipation of where price will be in the next five or ten minutes. On the other hand, a swing trader may make their trading decision based on where they anticipate prices will be in the following week. Moreover, a position trader may be looking at future price and value in a month or a year. The one common denominator is that all traders make their trading decisions based on their perceptions of value in the market.

In the past, traders have never had an analytical tool or a charting technique that helped them to identify and track value in real time for every time frame. Now, Market Profile charts make it possible for traders to identify and track value in real time in every time frame. This is the secret behind the power of the profile. The Market Profile gives us the ability to use this powerful knowledge to identify trading opportunities in the market and make better trading decisions. It helps us to better plan our trades; to better time our entries and exits to select more effective targets and stops.

Moreover, we are able to learn valuable information about the condition and the structure of the market. We can identify balanced and imbalanced markets; we can identify fair prices, unfair highs, and unfair lows for any given session. Furthermore, the profile allows us to follow the dynamics of the market auction process. The profile is an invaluable tool in the arsenal of any serious trader or investor.

History & Development

Market Profile charts and concepts are relatively new to the investment and trading world. The idea for the profile began in the early 1980s. In an attempt to create greater transparency for off floor traders and attract new business to the exchange, the Chicago Board of Trade (CBOT) started to make some market data and information

available to the public that was never previously available off of the trading floor.

The purpose of this information was to allow off-floor traders to gain some insights into the activities of floor traders. At that time, Les Rosenthal was the chairman for the exchange and Peter Steidlmayer was the CBOT director who was responsible for market information. Steidlmayer and Rosenthal were both strong advocates of a more transparent market. They worked together, searching for ways to open up the markets and attract more business to the exchange. This idea of information sharing was not embraced by everyone; there were many skeptics and foes against this information-sharing effort. Many local traders were concerned that their livelihood may be in jeopardy and felt that market data and floor information was a privilege reserved only for those traders on the floor.

On the other hand, Steidlmayer and Rosenthal were true visionaries that believed differently. They felt that openness would help to grow the markets and generate greater revenue and prosperity. They believed that the more information they disseminated, the more participants would be attracted to trading on the exchange. They understood the nature of the markets and that the new technologies being developed would create many new opportunities for future growth. However, these opportunities were contingent on the availability and accessibility of market information and data.

Using the concept of a statistical bell curve, Steidlmayer developed a new charting system to display actual trading data from the market and show the type of market activity that was taking place in every session. The seeds for the Profile were planted, and this new charting system developed by the CBOT demonstrated that as the trading data for each instrument was organized in a statistical normal distribution, the classic shape of the normal or bell curve frequently emerged.

A form of order and organization was observed for all commodity markets. The Profile chart was born and gradually started to gain the

acceptance and respect of market participants. Initially, only professional traders and experienced investors utilized Profile charts.

However, over the past two decades, Profile charts and concepts have become accessible to everyone that is interested in learning to use them. Advances in technology, sophisticated new trading platforms, and longitudinal studies of market data now make it possible for us to scrutinize and analyze valuable market data in ways that were unimaginable in the past. As a result, the Profile has evolved to become one of the most powerful analytical tools for traders, investors, and market analysts.

Profile Platforms

As more and more traders and investors are recognizing the value and power of Profile charts, more and more platforms are now including Profile charts. Naturally, different platforms will have different styles and various distinctive features. I have personally worked with the CQG platform (www.cqg.com), Investor/RT (www.linnsoft.com), and Market Delta (www.marketdelta.com). While there are certainly a number of other Profile platforms available, these are the only three that I have personally worked with. It is always helpful for anyone interested in learning about the Profile to obtain and work with a demo prior to selecting the platform of choice.

Common Misconceptions

The enigma and power of the Profile has created many misconceptions about this analytical tool. Before we begin discussing what the Market Profile is and how we can actually use it, we need to first address and identify some of the common misconceptions that exist about the Profile and its applications.

1. Market Profile Charts are Complicated

Unfortunately, many traders are not attracted to the Profile because they think that it is complicated, hard to understand, and difficult to apply. In reality, nothing could be further from the truth. The Profile is actually quite simple and easy to understand. It simply involves a different way of looking at the market. Once you can understand how it presents market data and the valuable information it offers, you will wonder how you could have ever traded without it.

It actually provides a very clear view of market activity as it happens. In some ways, it is far easier to identify critical market information from the Market Profile chart than it is from any other type of chart. The Market Profile is made up of simple building blocks or units. Watching the structure of the market develop in real time on the Profile is the most clear and precise visual representation of market activity. Once you understand the basic elements that make up the Profile chart, it becomes easy to comprehend and apply the Market Profile concepts.

Even though the Market Profile is easy to learn, it does take some time to learn it and to become familiar with the methods and techniques that are involved in applying it to the market. The learning curve and process will certainly vary from one individual to the other. However, with the proper education, it is just as easy for a beginner to learn as it is for an experienced trader.

In this book, every effort has been made to simplify the basic concepts that are involved with Profile charts and their applications. The book uses a simple systematic approach in explaining and illustrating various Profile concepts. Many diagrams and charts are frequently provided to allow the reader an opportunity to visually examine the elements and the structure of the Profile.

2. Market Profile Charts are Only for Futures and Commodities

Even though the Market Profile charting system was developed by the CBOT, one of the primary commodity exchanges, the concepts that were used to develop the Profile chart can be used for any electronic auction market. It can actually be used for displaying and tracking trading activity for stocks, ETFs, futures, commodities, bonds and currencies. If the data is available, the Profile will display it. The Profile concepts are not dedicated to any single type of data. The basic concepts and market structures can be applied to any market. This versatility makes the Profile an important tool for all traders to learn and understand.

3. Market Profile Does Away with Technical Analysis

Many traders have the misconception that Market Profile eliminates the need for technical analysis and traditional charting techniques. It is certainly true that Market Profile is a unique way of looking at market data, and it does provide us with valuable information that is not found in bar charts, line diagrams, or candlesticks. Nevertheless, it does not eliminate the need for technical analysis or other charting techniques.

Learning to use and apply Market Profile charting concepts does not mean that we will no longer need to look at or use any of other types of charts and technical tools. It is true that we will do away with many of the lagging and confusing indicators that are often stacked on charts. The Market Profile works extremely well with many of the traditional technical analysis methods such as support and resistance, chart patterns, and trend lines.

Consequently, to fully realize the potential and usefulness of the Market Profile, it is important to develop the ability to integrate the information that we gain from a Profile chart with the information that we acquire from other traditional charting techniques and technical tools.

Traders must continually analyze the market with every useful tool that is available to them. The Market Profile is an incredibly powerful analytical tool. It significantly adds and enhances any trader's toolbox. However, just because we can utilize Market Profile data, it does not mean that we are going to abandon all other analytical tools and techniques. Imagine the constraints and restrictions that an artist would place upon himself if he limited his creativity to the use of a single brush or a single color. Trading is both an art and a science; a trader must learn to select the right blend of tools and data to produce a masterpiece.

4. Market Profile Requires Memorization of Patterns

Another common misconception is that to effectively utilize the Market Profile all that is required is to simply memorize a set of patterns or rules. While it is important to learn to identify certain patterns as they develop, it is far more important to understand why the patterns are occurring. The Market Profile is not about memorization, it is about understanding and interpreting the patterns that we observe as they develop.

To successfully apply Market Profile concepts, one must genuinely understand the principles that influence market behavior. Therefore, in learning to effectively utilize the Market Profile, it will be necessary to develop a real understanding of the factors and elements involved in creating the patterns and the resulting price developments.

Interpreting Market Profile data requires a coherent understanding of the market and how it works. Traders will need to develop a clear understanding of a normal distribution, the laws of supply and demand, and the fundamentals of an auction market.

5. Market Profile is a Signal System

Another common misconception about the Profile that many traders often have is thinking that the Profile is a signal system. They believe that the Market Profile will provide them with buy and sell signals. Unfortunately, nothing could be further from the truth. The Market Profile was never intended or designed to be a buy or sell signal-generating system. Do not expect or look for the Profile to produce any signals.

Moreover, it is important for traders to understand the weakness and limitations of buy and sell signal systems. These systems immediately lose their effectiveness when the market conditions on which they are based on change. Market Profile charts, on the other hand, are an accurate representation of actual market data and activity as it occurs, and thus allows us to see the changes in market conditions as they happen. This makes it possible for a Profile trader to make informed decisions about the market. Furthermore, it provides them with the flexibility and ability to react quickly and adjust their decisions based on market dynamics. The Profile trader's judgment and interpretation of market data determines the appropriate trading decisions that are required for each situation.

6. Market Profile Predicts the Future

Many traders incorrectly assume that the Market Profile can predict for us what will happen in the market. Once again, nothing could be further from the truth. The Market Profile is focused on the present. It allows seeing with clarity what is happening in the market at

the present moment, but it does not tell us what will happen in the future. Unfortunately, nothing can predict the future for us with any degree of certainty.

The future is always an unknown and the Market Profile does not change that. However, it certainly helps us to understand what is currently happening in the market. As we gain a better understanding of the current condition of the market, we can then make better trading decisions about what is likely to happen in the future.

Trading Guidelines for Success

There are some simple guidelines that if followed, will immensely help to increase the likelihood of success and survival in the market. The following guidelines must be understood and taken seriously by all new profile traders:

1. Trading is not gambling or a game of chance. It is a skill and a discipline that can be learned.
2. Consistently profitable trading cannot be accomplished without a coherent understanding of the market and how it works.
3. Learning to trade requires developing both mental and psychological skills.
4. Never practice or try to learn to trade with real money.
5. Never trade with money you cannot afford to lose.
6. Never trade without a tested strategy. Every trade entry must have at minimum a target and an exit.
7. Risk management is an essential component of any trading strategy.

-
8. Never trade live with a strategy that was not extensively paper traded or practiced first.
 9. Never trade in a market that you do not understand.
 10. Never enter a live market until you are prepared.
 11. Start small and grow.
 12. If you are not making money, review the above guidelines and identify which ones you have violated.

Trading is a serious business. It is important to be committed to the process of learning and to pursue it in an intelligent manner. As with any endeavor in life, trading can be a most pleasant and rewarding experience, or it can be a difficult and arduous journey.

Our objective in this book is to introduce traders to powerful profile concepts and analytical techniques that will make the process of trading as enjoyable and rewarding as possible. As you learn and grow as a trader, you will find that learning to trade profitably is worth the effort and is probably one of the most valuable skills that one can acquire in life.

However, it is crucial to allow yourself adequate time to learn, practice, and master the skills that will lead to success.



MARKET PROFILE CHARTS

Market Profile charts offer a truly unique way of looking at market data. Many traders and investors believe that it is the best way to chart market data. In order to understand and appreciate the benefits of Market Profile charts, we need to briefly review and look at some of the other types of charts that are available.

Personal computers now make it possible to view and display market data in a wide variety of formats. Nevertheless, almost all of these various chart types will fall into two basic categories: either they will be time-based charts or non-time based charts. Time-based charts are constructed by displaying price movements for specified periods of time on a chart. These time periods are specified by traders based on the time frame that they trade. The time period specified for a chart could be in minutes, days, weeks or months. The two most common and frequently used time-based charts are the bar and candlestick charts.

Almost all charts will either be time-based or non-time based.

Non-time based charts include the Renko charts, tick charts, volume bar charts, range bar charts, and point and figure charts. These are all based on a study of pure price movement that is completely independent of time. In other words, they do not take time into consideration when plotting price movements. They will only display price movement. The idea of non-time based charts is not new to the markets. The earliest non-time based charting technique is the point and figure charting process. This chart type dates back to the turn of the twentieth century. It was extremely popular in the early days before computers were available, because point and figure charts were very simple to plot and helped traders to identify trends and reversals as well as levels of support and resistance. Even though the technique seemed to have lost much of its appeal in the past two decades, it is starting to re-emerge as a popular tool once again.

Market Profile charts on the other hand offer a completely different way of looking at the market. While they track both time and price in the market, they also allow us to view the price movement in the context of actual market activity as it develops. The Market Profile chart displays each time period of market activity in a separate column on a vertical axis with an ascending price scale.

To help us understand the Market Profile chart structure, we will begin by looking at the basic building blocks of the chart and the concepts that are involved in building it. We will begin by examining the Time Price Opportunities (TPO) on the chart in conjunction with other key Profile chart elements.

Key Profile Chart Elements

Time Price Opportunity (TPO)

The most basic unit or building block of a Market Profile chart is the time price opportunity, or “TPO”. A time price opportunity is created or printed on the chart as soon as the market touches a specific price at a specific point in time. A time price opportunity is just that, a window of opportunity for a trade at a certain price at a given point in time. Once a single trade takes place at this market opportunity, a print is recorded on the Profile chart. If multiple trades take place at this opportunity during a set period of time, the Profile will still only print a single TPO for that opportunity within the specified period.

A TPO simply identifies for us that at least one trading activity has taken place at a specific price within a specified period of time. If several trades take place at that same price at different times within the specified period, the profile will still only have a single TPO print at that price for the given period.

A TPO on a Profile chart can be visually represented in a number of different ways. It could be as simple as a single colored block or a letter in the alphabet. Most commonly, Profile charts will display TPOs using a letter of the alphabet. Each TPO print appears in front of a price ladder that displays a range of prices. In Figure 1.1, we have two TPO prints represented by the letter “A”. We have one TPO at a price of 1305.50 and another TPO below it at 1305.25. The “O” above the two prints indicates the open of the period and the asterisk “*” indicates the close for the period.

The time price opportunity, known as the TPO, is the most basic unit of a Market Profile chart.

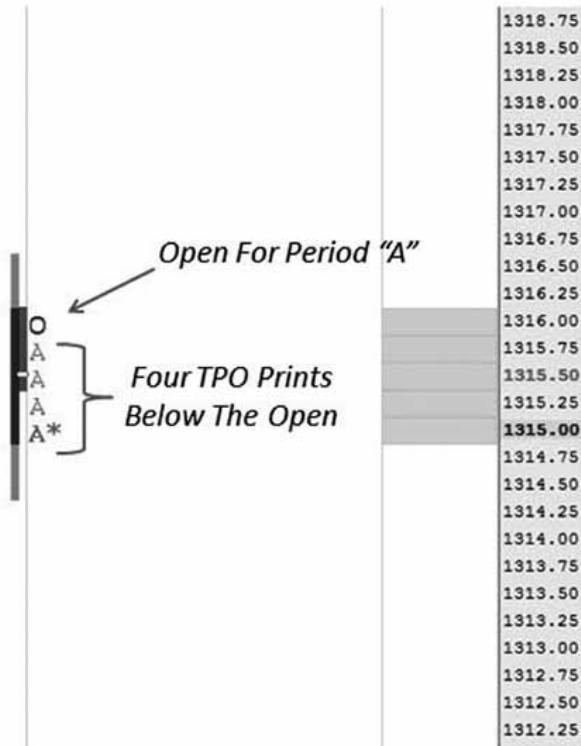
Over time, as the trading session develops, the TPOs will accumulate and display a distribution of letters showing where the market has

traveled over the course of the session. Each 30-minute session is represented by a letter of the alphabet during the day.

The activity for the day always starts on the left side of the Profile chart. The first time a trade occurs at any price during the day, a TPO is automatically printed in the current active period or column on the chart. When the same price is traded later in the day during a different time period, the reoccurring trade will appear in another new column that will appear to the right of the earlier TPO that was previously printed at that price. When a price is revisited at a later period and a new TPO is printed next to an earlier TPO, the distinction will be obvious because each TPO will have a different letter identifying the period where the time price opportunity occurred.

**Figure
1.1**

Time Price Opportunity (TPO)



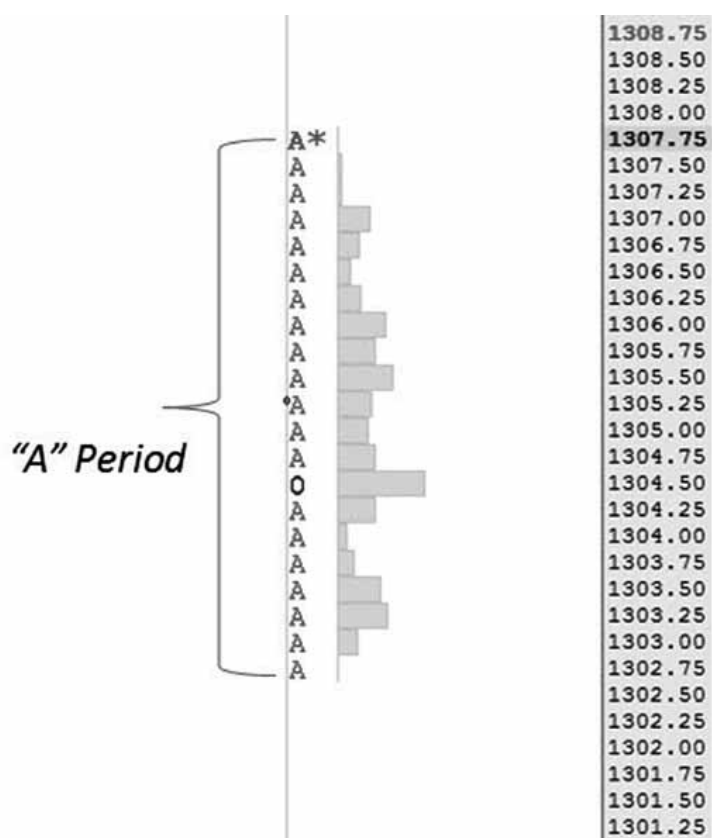
Source: MarketDelta; copyright © 2011 by MarketDelta LLC
For a closer look at this chart visit www.traderslibrary.com/TLEcorner

A Profile Period or Column

As the market auction process develops, the market moves back and forth along the price ladder and prints TPOs, creating the first period or column on the Profile chart. As previously mentioned the time duration for each period on the Profile chart can be set to a desired time frame. However, the standard or default setting for most daily Profile charts is thirty minutes for each period. Figure 1.2 displays a total of twenty “A” prints on the chart for the first thirty minutes of the day. Seven “A” prints appear below the letter “O,” which displays the open price TPO print for the period, and we observe thirteen letters “A” TPO prints above the open.

**Figure
1.2**

A Profile Period Column



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The full “A” column represents the entire range of activity for the first thirty minutes of trading for the day. In Figure 1.2, the full range for the column “A” extended from a low price of 1302.75 to a high of 1307.75. As the trading day progresses, more columns will start to emerge. New letters begin to print and appear on the chart; each new column of activity that is printed will print in a successive sequence of letters.

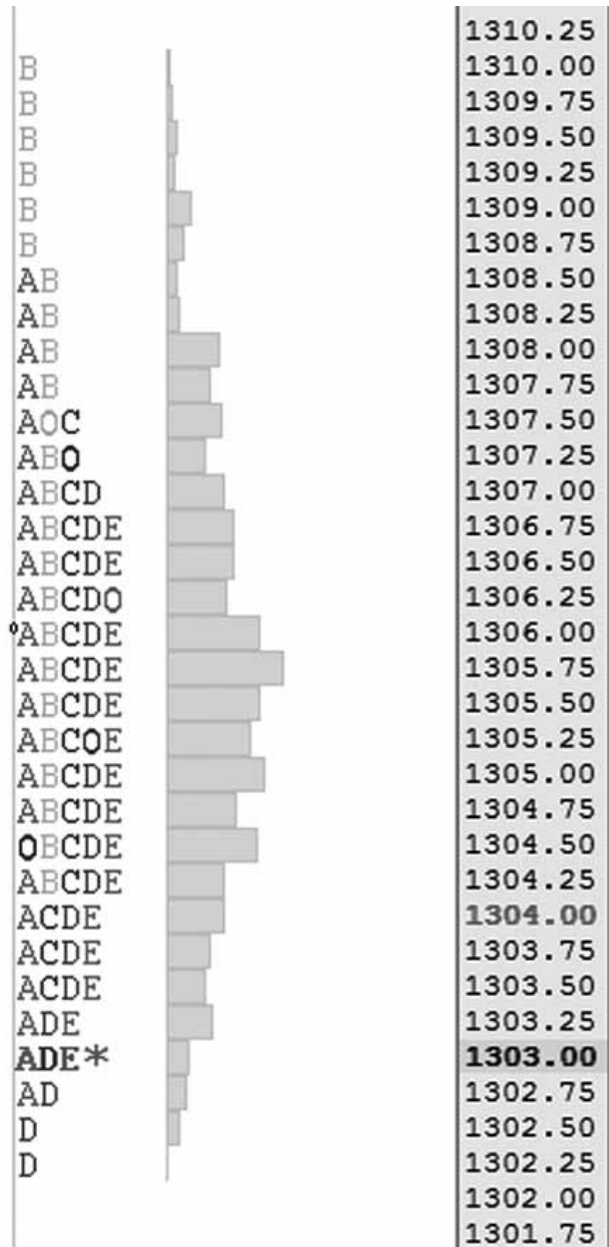
In Figure 1.3, we have a developing Profile that is made up of five different columns. The first column starts with the letter “A” and the last column in the sequence ends with the letter “E.” Each letter displays the market activity for each half hour period. There are two basic ways to display the Profile development on the chart. The Profile can be displayed in the form of a composite as we see in Figure 1.3, or in a split Profile format as we can observe in Figure 1.4.

The composite Profile chart is the typical display that allows us to view the normal distribution of activity for the day. However, in a split Profile, each letter column appears separate from the other columns on the chart. This allows us to easily identify the range and size of each column relative to the others on the chart. Some traders prefer this visual form, since it resembles that of a regular bar chart.

As the day’s trading activity progresses and more columns develop on the chart, the Profile structure for the day starts to emerge and is eventually completed for the day as shown in Figure 1.5. The completed Market Profile chart for the day displays the market activity and price range development for the day. This completed structure offers a plethora of valuable information about the day’s activity. It also allows traders to identify whether the market was balanced or imbalanced (trending or non-trending). It helps traders identify the fair price for the day, the value area, and other useful value parameters for the session. We will examine many of these aspects in the following chapters.

Figure
1.3

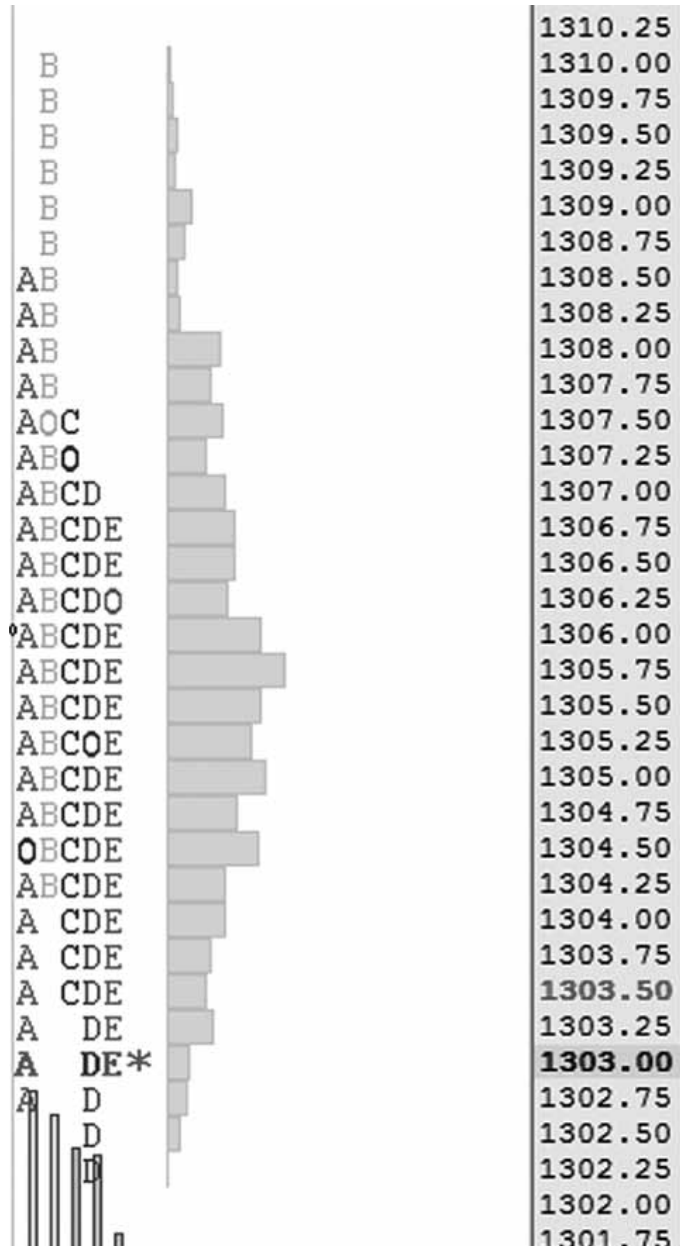
Developing Profile



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Figure
1.4

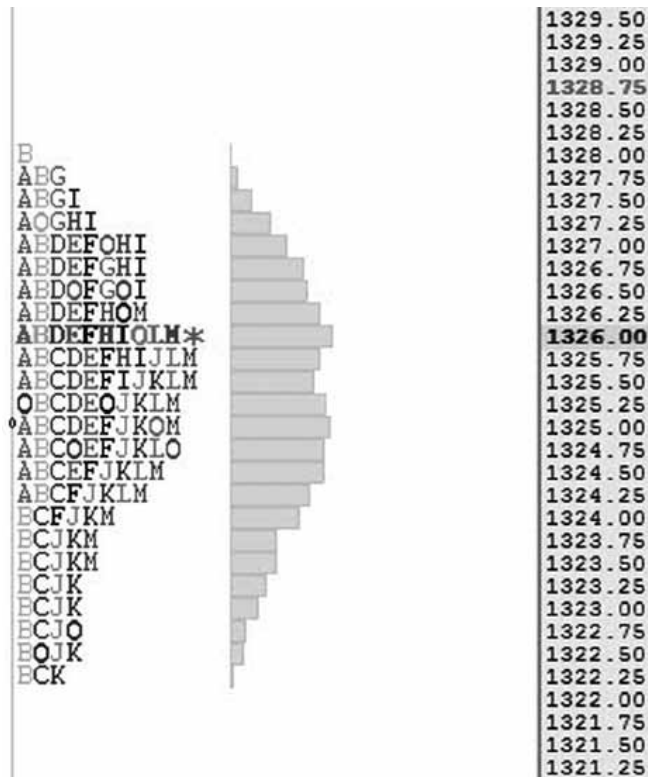
Split Profile



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**Figure
1.5**

Profile Structure Completed



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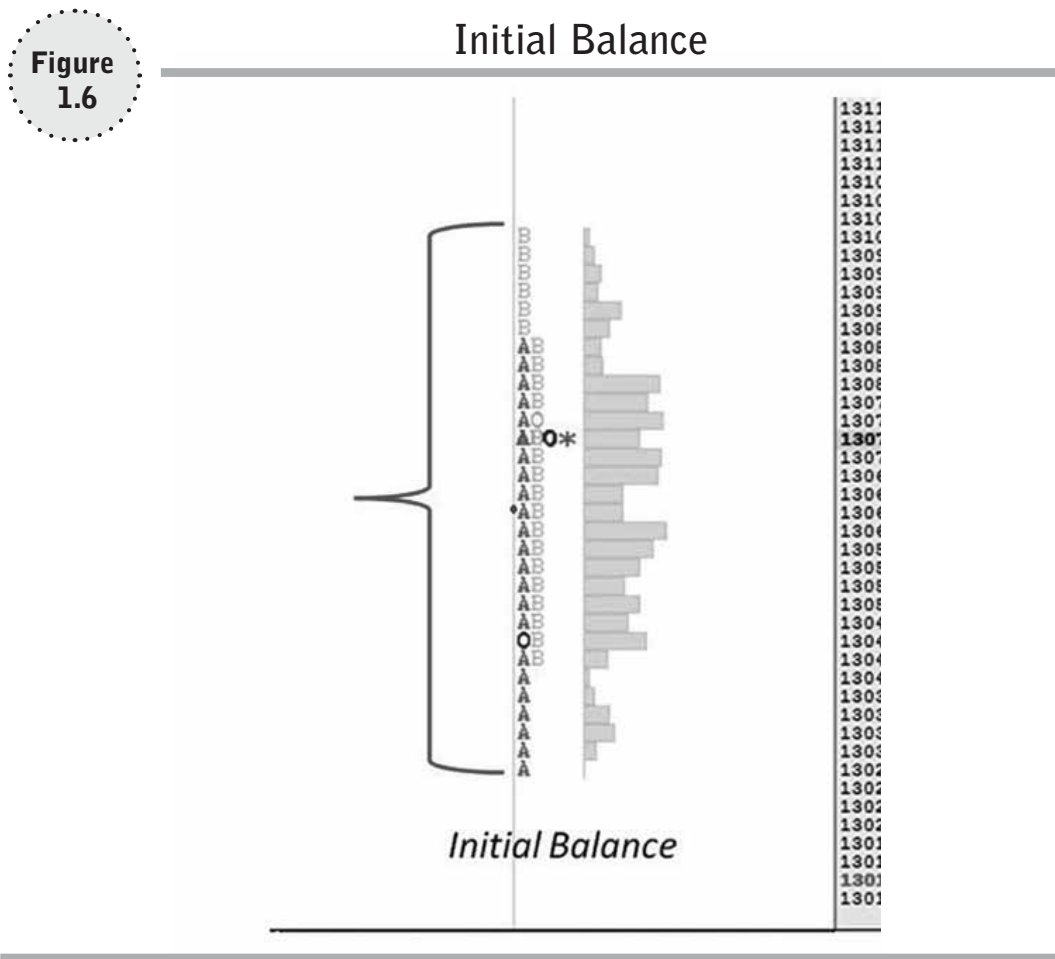
Trading Range

Every letter period or column on the Profile chart has a defined range of TPOs. The wider the range, the greater the number of TPOs that are displayed on the chart for the specified period. The range basically extends from the lowest price point to the highest price point during any given period on the chart. Once again, it is important to note when each range shows the extent of a price movement during that period. If multiple trades occur at the same price at different times during the same thirty-minute period, only a single letter print is printed on the chart for that price. A single TPO print is printed only once at a price during any given period on the chart. Multiple prints at the same price only occur when the market trades at that same price during different periods of the day.

When consecutive TPO ranges are expanding directionally, this is usually indicative of a trending market. A shrinking TPO range is often a sign of uncertainty or a resting period in the market. TPO ranges that are expanding in both directions are usually a sign of volatility in the market and may be a prelude to a directional move.

Initial Balance

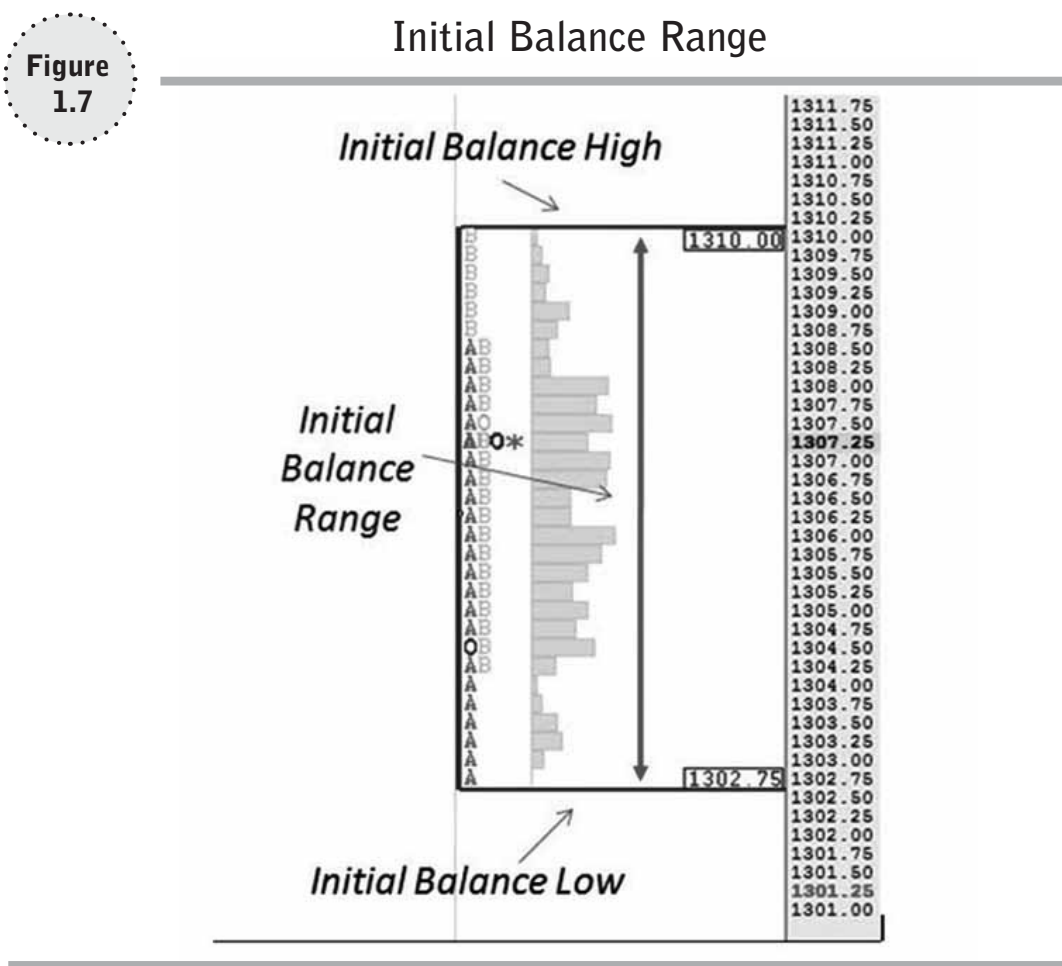
The initial balance is defined as the range of price movement that occurs during the first hour of trading for the day, as seen in Figure 1.6.



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It is made up of the first two half-hour periods for the day. In other words, the initial balance is the range of price movement created by the first two letters “A” and “B.” This initial balance can often provide us with many important clues about the possible Profile structure developments for the day and the likely trading range for the day.

On many days the actual high or the low for the day is established during the initial balance period. Once the initial balance is created, it is prudent to display reference lines at the high and low of the initial balance range as shown in Figure 1.7. This helps traders to



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monitor and track further price developments for the day relative to the initial balance period. When the market is moving directionally, the price range will be extended in the direction of the trend. If the market is bullish, the initial price range will move higher, extending above the initial balance. However, if the market is bearish, the price range will drop lower than the initial balance.

If the day starts out with a relatively small initial balance range, there is a high probability that the range will extend to one side or the other. However, if the day starts with a wide initial balance, we will usually have one of three possible scenarios develop.

1. The market will continue to move in the same direction as the initial range and thus create a directional or trending day.
2. We may not have any expansion on either side of the wide initial range. In other words, the high and the low for the day will be the same as those of the initial balance period. All of the day's activity will be contained within the initial balance range.
3. The market actually slightly extends both the highs and the lows of the initial range. On some days, we may actually see prices rise above the high and drop below the low of the initial balance to test the highs and lows for a possible breakout on either side.

The initial balance period is usually the amount of time that it takes the daytraders or short term traders to find an area of fair price where two-sided trade can take place. If a high or a low is set during the initial balance period and continues to hold throughout the trading session, the daytrader is in control of the market for that day. If the other longer-time frame traders decide to enter the market with enough volume, they can extend the initial balance range and move the day's range price range up or down.

The initial balance is a key period for any trading day. It is important for a trader to carefully monitor, record, track, and study the initial balance data for the instruments that they trade. This will allow them to distinguish between wide and narrow initial balances for the day. Naturally, these initial balance ranges will vary significantly from one financial instrument to the other.

Pioneer Range

The pioneer range is a term that was identified by Steidlmayer, and it is defined as the range of TPOs that print for the first time when a price is hit in a session. It is important for a trader to observe market behavior during a pioneer range, to study and analyze the market's response as prices explore new territory. It helps to see whether the market is accepting these new price levels or if in fact the market is rejecting them.

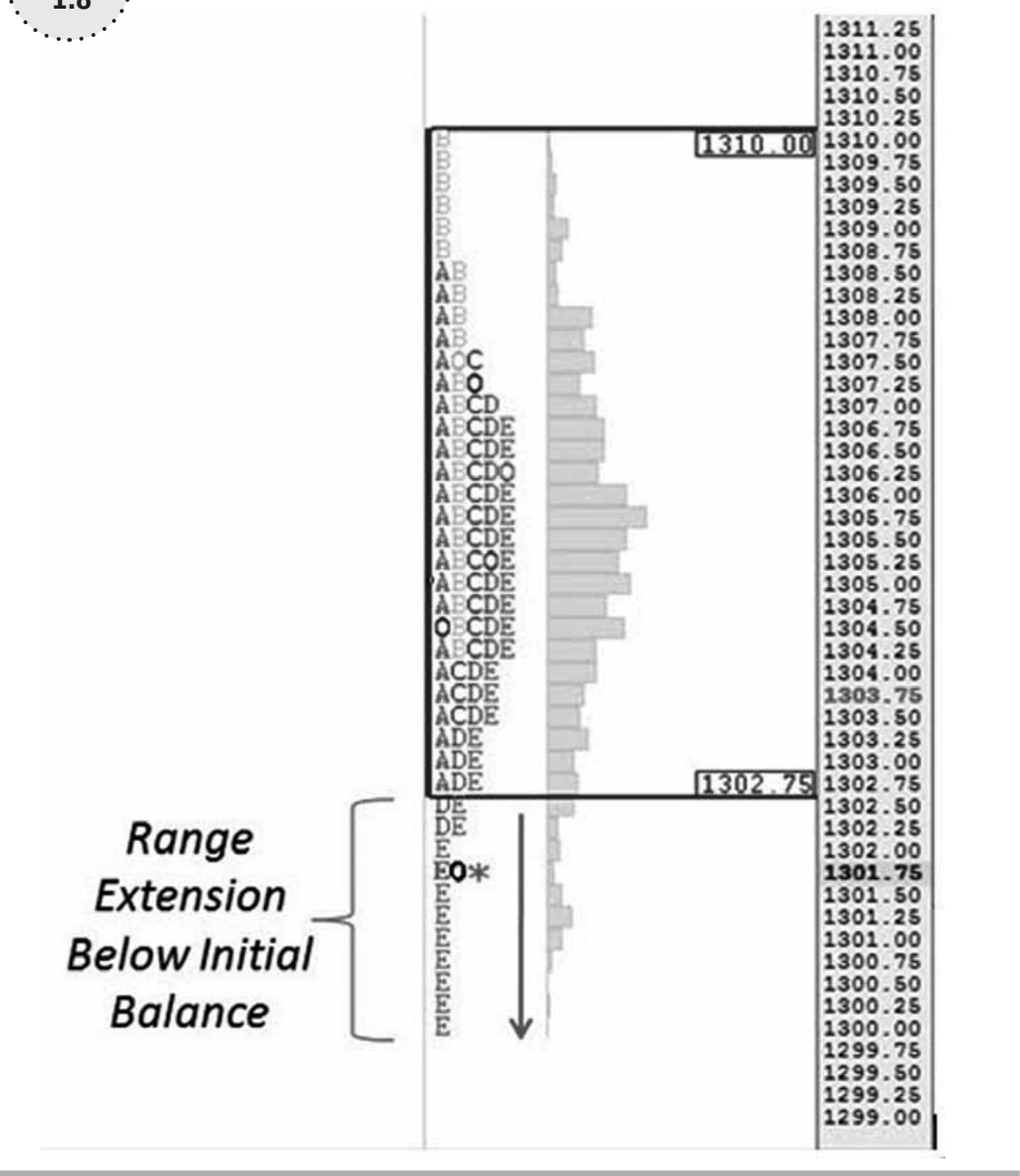
We should recognize that the first or opening range for any day session is a pioneer range. This is why we have given the initial balance such a special significance. It always gives us an early idea about market sentiment.

Range Extensions

Range extensions or expansions are price movements that extend beyond the initial balance or beyond a specified period of activity on the chart. A range extension or expansion below the initial balance can be observed in Figure 1.8. As the market auctions, a price range can be extended up or down. A range extension can often provide us with some insights into the potential direction of the market. Prices extended to the upside may be an indication of a bullish sentiment in the market. If prices move to the downside and continue to extend lower, this may signal a bearish sentiment in the market.

Figure 1.8

Range Extension Below Initial Balance



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
For a closer look at this chart visit www.traderslibrary.com/TLEcorner

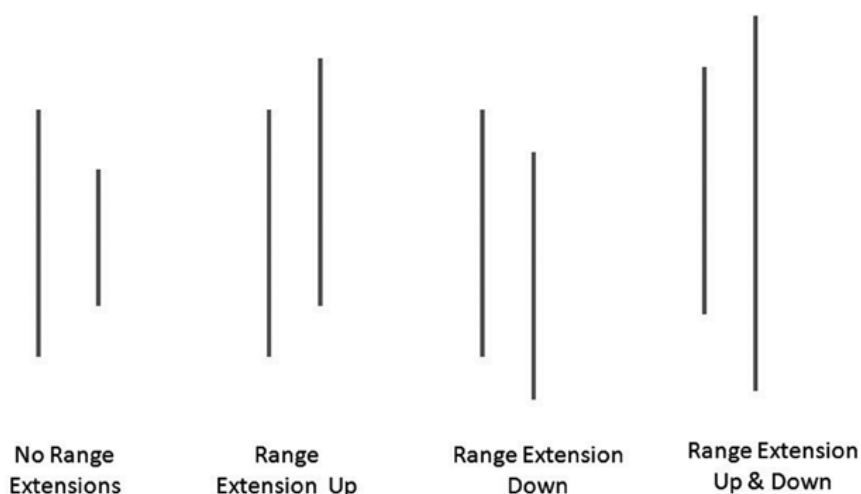
Price movements that extend beyond the initial balance are described as range extensions.

As the market auction process moves from one period to the next, there are several possible outcomes for the price range of each new period. First of all, the new period range may simply be contained within the range of the prior period. In this case, the market is consolidating in an identified value area. The range of traded prices may also move higher in the new period, thus extending the range of the prior period to the upside. An extension to the upside signals that buyers are in control.

On the other hand, the price range may also extend lower than the prior period's low, dropping the range. This indicates that the sellers are in control during the new period. It is also possible for the price range to extend both above and below the prior period's range. When this type of price range extension occurs above and below the prior period's range, this is an indication of volatility and uncertainty in

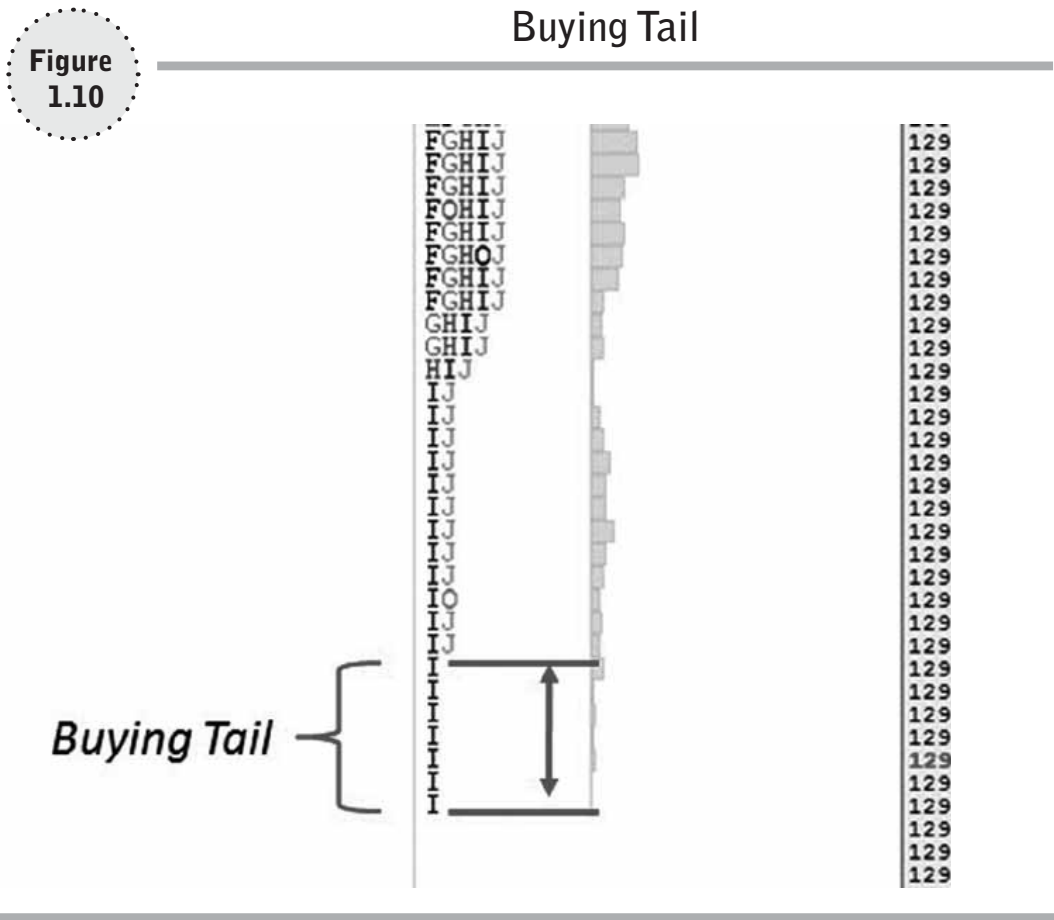
**Figure
1.9**

Types of Range Extensions



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

the market about possible future direction. On the other hand, if we do not get any range extensions above or below the prior period's range, the market is signaling that it is not ready to move away from the current price range. This may simply mean that the market is resting before continuing in the direction of the existing trend, or it may in fact signal a possible transitional period in the market prior to a change. These various types of possible range extensions are visually illustrated in Figure 1.9.



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Buying Tail

As a pioneer range enters and explores a new territory of lower prices, it may quickly encounter responsive buyers. Responsive buyers are long-term traders that are attracted to the market when they see a bargain. As the pioneer range drops to a level that is attractive to these long-term traders, they will quickly pounce on and buy these bargain prices, in much the same way that shoppers might jump at significantly reduced items on sale at a retail store. Once this activity takes place the market announces that the pioneer range has discovered an area where prices are considered to be at an unfair low. These low prices are quickly accepted and snatched up by the buyers, resulting in a single print buying tail. A buying tail indicates the presence of aggressive buyers in the market at that price level at that point in time. The longer the tail, the greater the bargain.

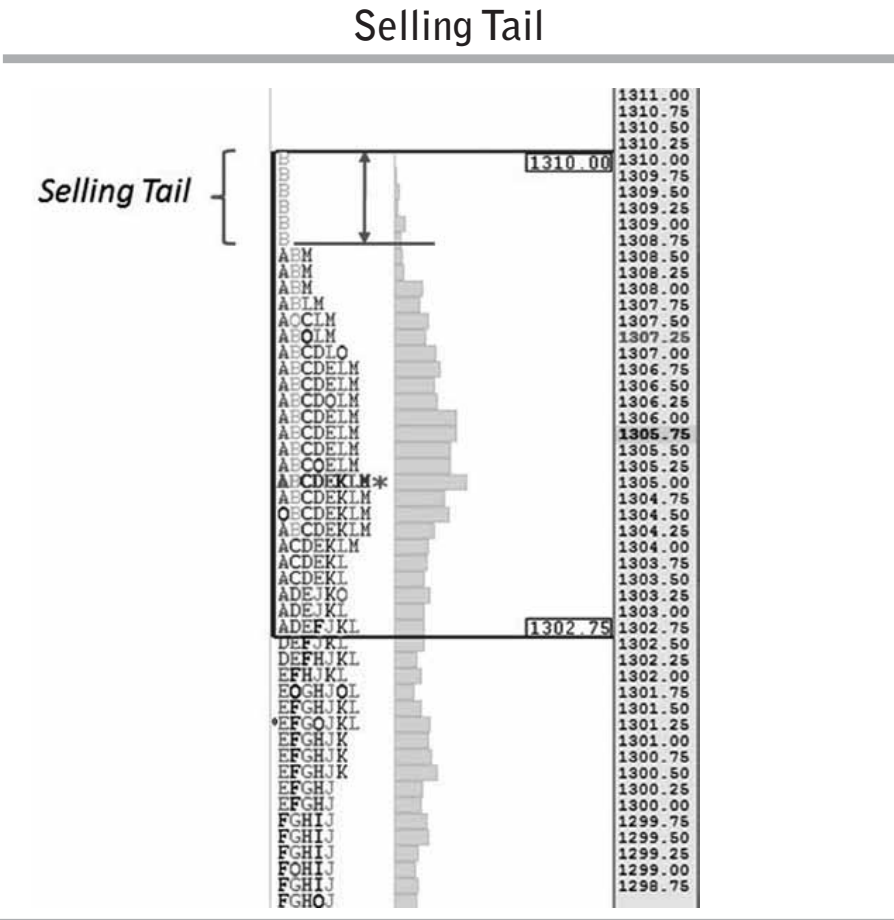
Although, arguably even a single print could be considered a buying tail, a tail with a single TPO does not carry the same significance that a longer buying tail will have. The longer the buying tail, the greater the conviction of the buyer or buyers at that price level. The market will frequently return to test these bargain levels to determine if the buyers are still as aggressive and as interested as they were in the past.

Selling Tail

When a pioneer range enters a price area where prices are rejected by market participants and considered to be at an unfair high, you will observe that sellers will eagerly step into the market. The sellers will be ready to supply the market and sell as much as they can at these unfair high prices. The aggressive response of the sellers creates the selling tail as seen in Figure 1.11.

The same rules of size for a buying tail apply in the case of a selling tail. The longer the tail the more significance it carries. The market will also frequently return to test these levels of unfair highs. The

Figure 1.11



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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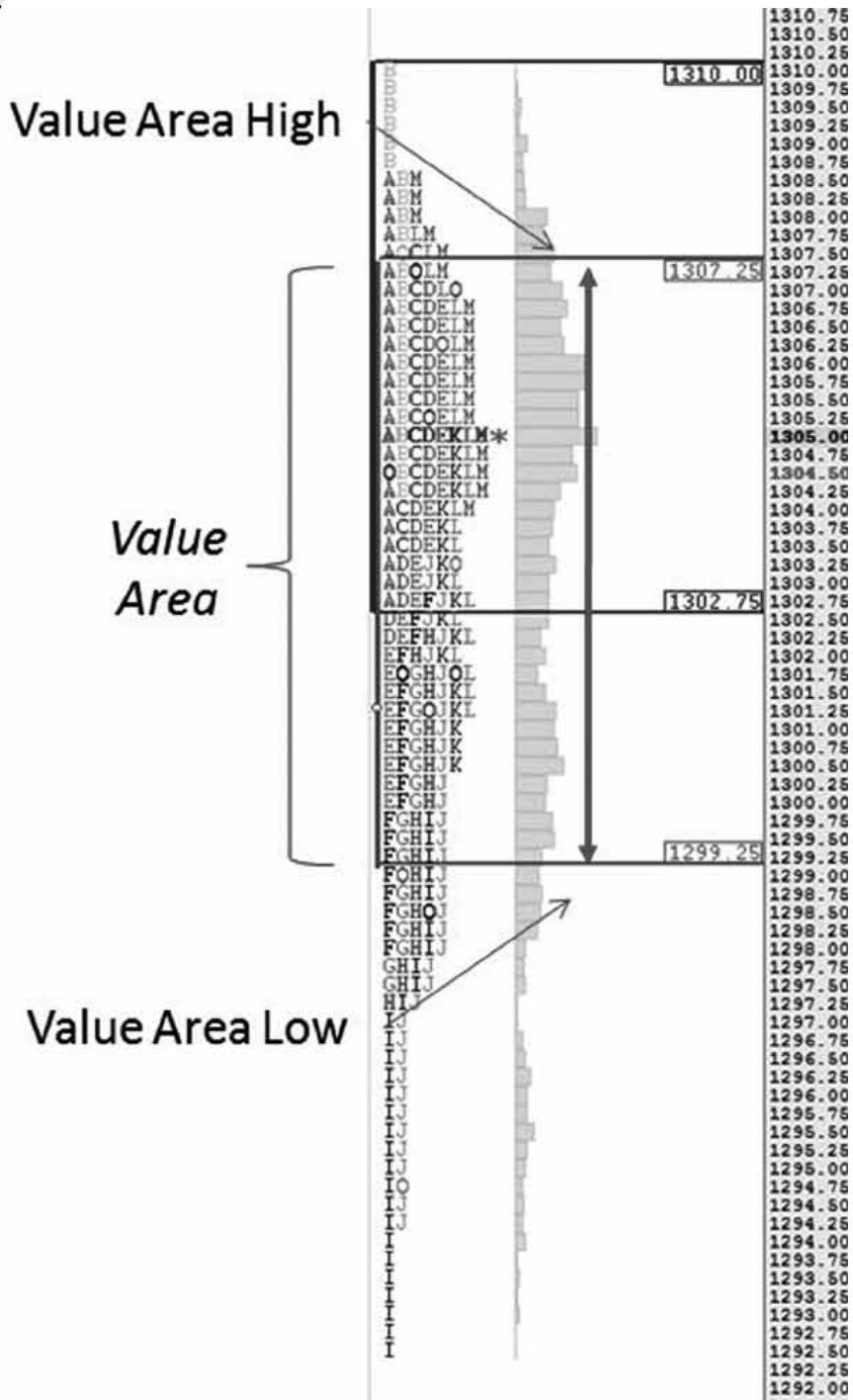
future presence of sellers at these levels will depend on developments in the market conditions. The market is continually changing and that is why these levels are sure to be tested at some later date.

Value Area

Our discussion of the Profile chart would never be complete without identifying and highlighting the value area on the chart. The value area is such an important and distinctive feature of the Profile, that we have devoted the entire next chapter to discussing it.

Figure 1.12

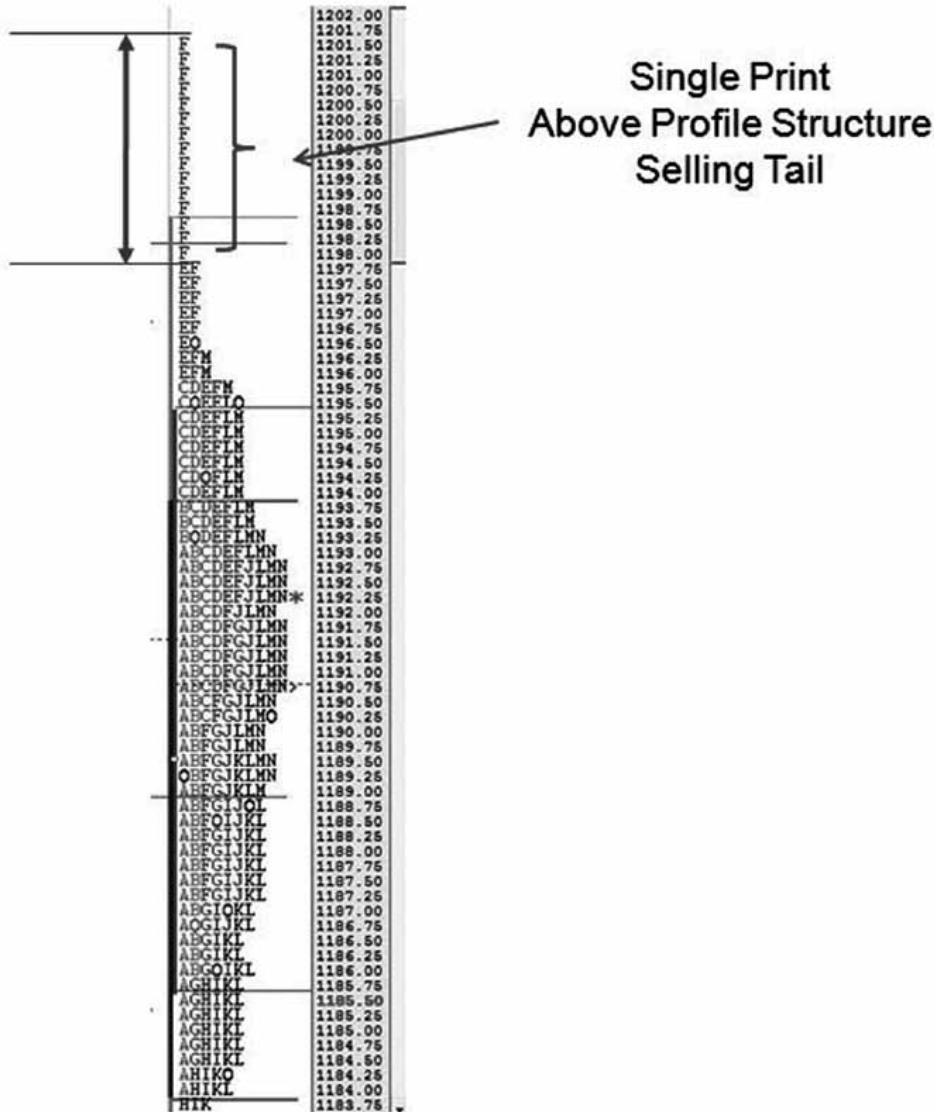
Value Area



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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Figure
1.13

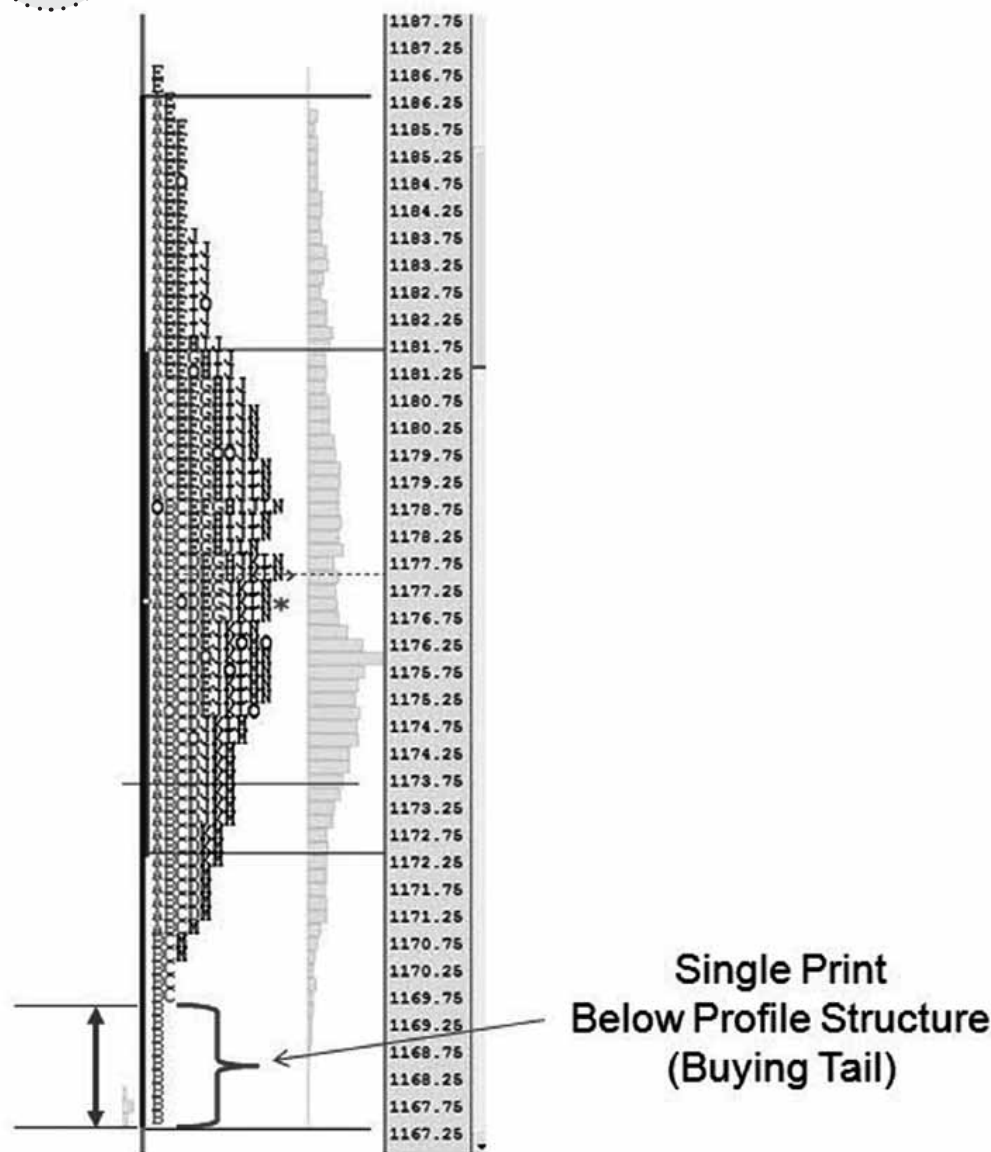
Single Print Above Selling Tail



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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Figure
1.14

Single Print Below Profile Structure

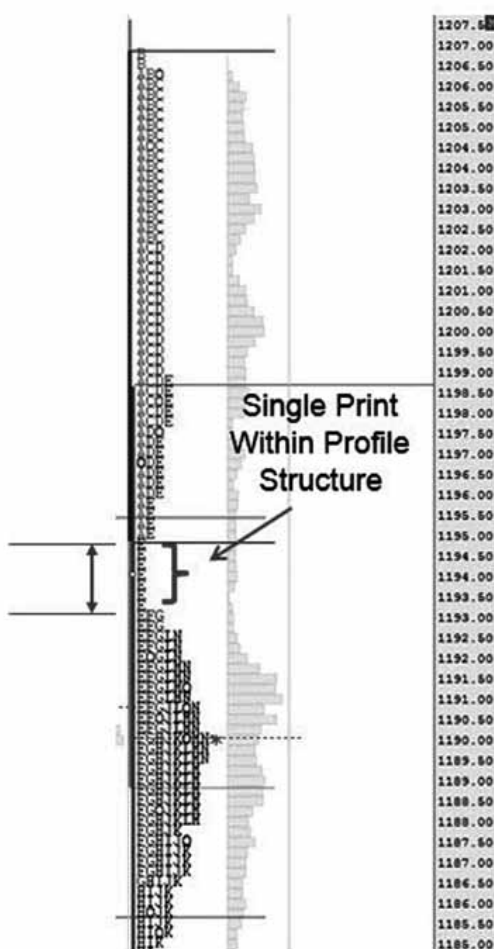


Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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In this chapter, we will merely identify it as the area on the Profile chart that contains 70 percent of the day's activity—or in other words, 70 percent of the TPOs on the chart as seen in Figure 1.12. The value area will be bounded by the value area low at the bottom of the value area price range and a value area high at the top of the value area.

**Figure
1.15**

Single Print Within Profile Structure



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Single Print

A single print is an area or segment on the Profile chart that only has a single column of activity. A single print can be made up of one or more TPOs; it can appear at the top, in the middle, or at the bottom of the Profile. When a single print appears at the top of the Profile structure, it is described as a selling tail, as can be seen in Figure 1.13. When it is observed at the bottom of the Profile chart, it is described as a buying tail, as can be seen in Figure 1.14.

However, when it appears within the Profile structure, it is described as a minus development or simply a single print, as can be seen in Figure 1.15. Single prints are significant structural elements on a Profile chart because they identify price levels where the long-term traders demonstrated either aggressive buying or selling behavior in the market. These aggressive levels of involvement provide us with insights about the sentiments of the long-term participants in the market. Furthermore, the price levels where this activity occurs eventually become reference levels as either support or resistance based on the type of activity that was involved.

In Figure 1.15, we observe that in period “E” the market experienced a strong price drop. Prices dropped from 1195.00 to as low as 1187.00. The market returned back up in later periods but was never able to move above 1193.25, leaving a single print on the Profile structure from 1194.50 to 1193.25.

Summary of Key Profile Chart Elements

Market Profile charts offer insight into market data that allow traders to display market data in a wide variety of formats. Almost all charts will either be time-based or non-time based and will have key elements that enable traders to easily interpret them when examining the market. Here is a brief review of key terms that are necessary to understand when using Market Profile charts:

-
- ▶ **Time Price Opportunity (TPO):** The most basic building block of a Market Profile chart. A TPO is created or printed on the chart as soon as the market touches a specific price at a specific point in time. It can be visually represented in a number of different ways, including a single colored block or a letter of the alphabet.
 - ▶ **Profile Period or Column:** The market moves back and forth as the market auction process begins, creating the first period or column on the chart. As the trading day continues, more and more columns emerge, each printing in a successive sequence of letters.
 - ▶ **Initial Balance:** The range of price movement that occurs during the first hour of trading for the day, made up of the first two half-hour periods. It can provide important clues about the possible Profile structure and range of price development for the day.
 - ▶ **Pioneer Range:** The first or opening range for any day session. It is defined as the range of TPOs that print for the first time when a price is hit in a session.
 - ▶ **Range Extension:** The price movement that extends beyond the initial balance or beyond a specified period. They can often provide insights into the potential direction of the market.
 - ▶ **Buying Tail:** When the market announces that prices are at an unfair low, many buyers enter the market at that price level at the same point in time. The longer the buying tail, the greater the conviction of the buyers at that price level.
 - ▶ **Selling Tail:** When prices enter an area that is considered to be an unfair high, sellers step into the market and sell as much as they can while the prices are still at the unfair high. The longer the tail, the more significance it carries.
 - ▶ **Value Area:** The area of the Profile chart that contains 70 percent of the day's activity. It is bound at the bottom by the value area low and at the top by the value area high.

Although some of the elements of the Market Profile hold more significance than others, each one is necessary in fully understanding the charts. We will discuss in greater detail some of the more important elements in later chapters of this book.

Chapter One Quiz

1. Which of the following charting techniques is not a time-based charting technique?
 - a. Market Profile Charts
 - b. Point & Figure Charts
 - c. Line Charts
 - d. All of the above

2. Tick charts and volume charts are the same exact type of chart; they both display trading activity in the same way.
 - a. True
 - b. False

3. Market Profile charts are based on market activity over a specified period of time.
 - a. True
 - b. False

4. Market Profile charts for equal periods of time will always have the same number of time price opportunities (TPOs).
 - a. True
 - b. False

-
5. Thirty minutes is the minimum period setting for any Market Profile chart.
- a. True
 - b. False
6. The range low and high are visible for each period on the Profile chart.
- a. True
 - b. False
7. In a split Profile, each letter column appears separate from the other columns on the chart.
- a. True
 - b. False
8. The initial range on a daily Profile chart can often reveal valuable information about the activities for an entire day.
- a. True
 - b. False

-
9. The pioneer range for any day only occurs at the open of the day's session.
- a. True
 - b. False
10. Every Profile chart will have either a selling tail or a buying tail.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

2

VALUE AREA

Webster's dictionary defines value as a fair return or an equivalent in goods, services, or money for something exchanged. The monetary worth of something defines its market price. Value is at the heart of any trading activity. It is the core concept behind any buy or sell decision. If you are planning to buy a new personal computer and you saw one advertised for \$1,000, would you immediately buy it? Does the fact that someone decided to announce that it is on sale for \$800 make it an immediate bargain? The obvious answer to these questions is of course not. Most rational consumers would not immediately buy the computer simply because it was on sale, unless they had some idea about its true value on the market.

Value: a fair return or equivalent in goods, services, or money for something exchanged.

Informed Buyers

While it is certainly possible that the \$800 price tag be a great deal, we cannot be sure unless we are an informed buyer. An informed buyer or seller possesses information relevant to the value of an item in the market where they wish to conduct a trade. If market information determines that this same exact computer has a retail value of \$1,200, then the offer of \$800 would be a great value. However, if we discover that most retail outlets offer that computer for \$800 or \$900, our perspective immediately changes. The \$800 offer would no longer be such a great value after all. The evaluation of value requires information about the market and the retail value of the item in the market. In the case of the computer, this information can be easily obtained online or perhaps by visiting a number of local retail outlets. Naturally, most rational consumers would like to purchase the computer at a fair price. No one likes to overpay.

The motivation for buying or selling decisions made by large institutional traders or investors is not any different. They too are rational market participants and they certainly do not like to overpay for anything. Consequently, before any large institutional investor commits any of their funds to a trade, they will always carefully study the value of the item in the market. Their buying decisions are made only when they believe that these items are undervalued in the market. Their teams of analysts are continuously and diligently researching information that will help them to evaluate and determine the value of various financial instruments. They use a combination of fundamental and technical data. The perceptions of value will differ greatly among different market participants. However, all seasoned market participants base their buy and sell decisions on their perceptions about value in the market. An informed trader will not make any trading decisions without some idea about where value is in the market.

In any market, a buyer or seller must have some way of identifying value in the market. Market Profile charts are the only charting technique that will provide traders and investors with a clear view of where value is in the market at any given point in time.

The Market Profile and Normal Distribution

Peter Steidlmayer developed the Market Profile based on the statistical normal distribution to identify value in any market. The normal distribution analysis is an important statistical study that is observed in many natural processes. It is a simple yet powerful statistical data distribution pattern. This distribution pattern occurs in almost every large group of data. What often seems to be a random variation in a given population of data ultimately tends to conform to a specific probability distribution. This statistical distribution is known as the normal distribution.

What often seems to be a random variation in a given population of data ultimately tends to conform to a specific probability distribution.

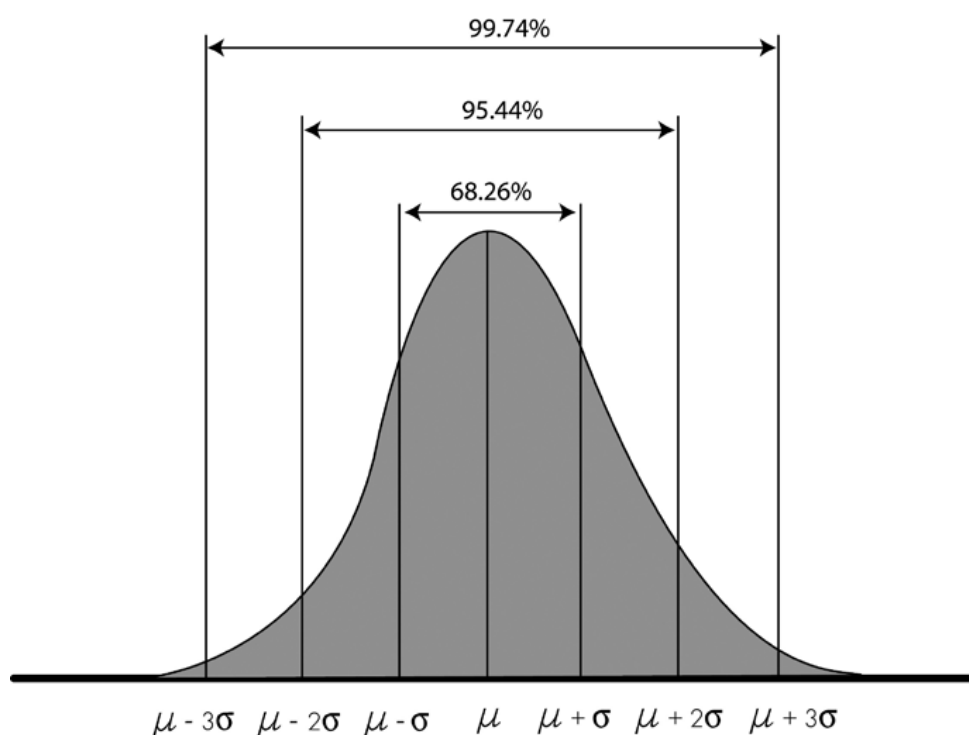
The normal distribution is the most commonly observed probability distribution in nature. If we examine the data for the age, IQ, height, weight, or eye color of any large group of individuals, we will find that when we tabulate the data that we collect about any of these variables, and the result will create a statistical normal distribution. In the late 1700s and early 1800s, renowned mathematicians like de Moivre and Laplace began to apply and use this statistical distribution method in their work. German mathematician and physicist Carl Gauss used it to analyze astronomical data and consequently, it is often referred to as the Gaussian distribution.

Gaussian or normal distribution is a symmetrical pattern with a single central peak at the mean or average of the data as shown in Figure 2.1. The shape of the normal distribution curve is often described as the *bell curve* as a result of its characteristic bell-shape. The graph for the distribution tapers off evenly on either side of the mean. Fifty percent of the distribution lies to the left of the mean and fifty percent lies to the right of the mean.

The spread of a normal distribution is controlled by the standard deviation. *Standard deviation* is a calculated measurement of variability or diversity that is used in statistical analysis and probability theory. The standard deviation shows us how much variation or “dispersion” there is away from the “average.” The smaller the standard deviation, the more concentrated the data, as observed in Figure 2.2.

**Figure
2.1**

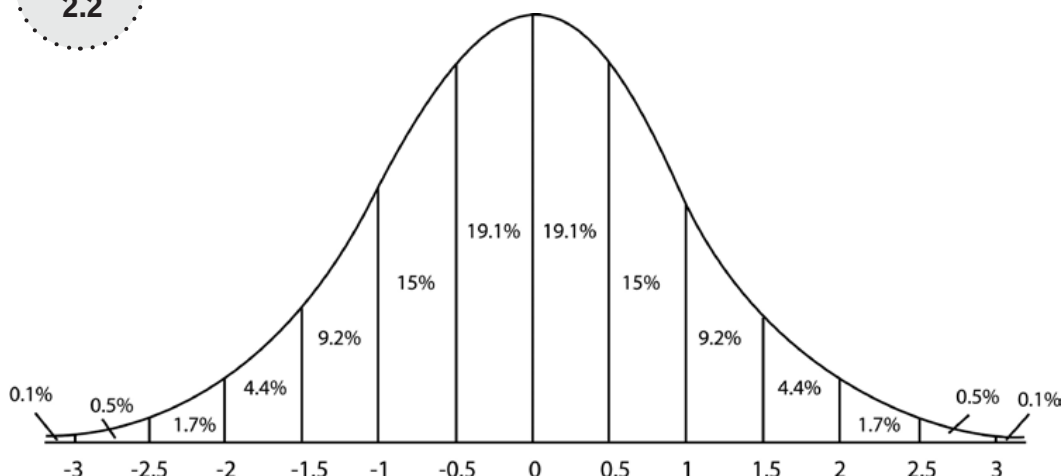
Gaussian Distribution



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

**Figure
2.2**

Normal Curve Standard Deviation



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A normal distribution can be completely specified by two key parameters, the mean and the standard deviation. The normal distribution also follows an empirical rule. The empirical rule is a common way to analyze data in the normal distribution. It provides us with a quick estimate of the spread of the data in the normal distribution. Once we have identified the mean and the standard deviation for the data set that is included in the normal distribution, the empirical rule basically states that:

- ▶ 68 percent of the data will fall within one standard deviation of the mean
- ▶ 95 percent of the data will fall within two standard deviations of the mean
- ▶ 99.7 percent of the data will fall within three standard deviations of the mean

This empirical rule is extremely helpful in identifying or determining the probability of occurrence of a certain value in the normal distribution. The closer the value is to the mean, the greater the probability of its occurrence.

Value Area

Using live market data in the form of TPOs, Steidlmayer adopted the normal distribution curve to identify the value area and create the Profile chart. The value area on a Profile chart identifies the price range that includes approximately 70 percent of the trades that occurred during a defined session. Since this is the area of prices where most of the activity occurred during the trading session, it is therefore the area where prices were most accepted by buyers and sellers. In other words, it is the price range where most traders felt comfortable to conduct their trades. Since this was the area of greatest activity during the session, it is also the area of the greatest liquidity during that session. It is the area where most of the market trading action takes place.

The Market Profile chart is the only chart that allows us to view market activity in terms of value. By definition, market value for any given financial instrument is the price range or price area where the market has found buyers and sellers equal in strength.

Identifying and understanding where value is in the market has many advantages. These advantages may not seem intuitive to most traders because they are not accustomed to looking at value in the market. First of all, being able to track and follow where value is in the market allows traders to identify areas of liquidity in the market. This information is invaluable to the short-term or intraday trader. Intraday traders typically trade using large position sizes and seek only a small profit for each of their trades. Consequently, market liquidity is essential for the success of this type of trading strategy. Short-term traders are most active within the value area.

Identification of the value area also helps the long-term trader to identify price levels that may be advantageous for a buy or sell decision. As prices drift lower below the value area, they present buying opportunities for the long-term trader. When prices are below value, they are considered advantageous and thus attract the long-term buyer seeking an advantageous price in the market.

When prices rise significantly above a defined value area, they present the long-term sellers with an advantageous selling opportunity. Consequently, we often find that as prices drift too far above value, long-term sellers will be attracted to supply the market and prices will drop back to the value area.

In monitoring how the market reacts to different price levels, traders gain a better understanding of how the market participants behave at various price levels. As prices move away from value to an unfair high price level, we can see whether this level will be accepted or rejected by the market. If the market rejects these prices at an unfair high, this rejection will appear on the Profile in the form of a single print selling tail. When the sellers aggressively step in to supply the market at an unfair high, the market tends to drop back and return to the value area.

On the other hand, if the market drops too far below value and reaches a price level that is at an unfair low, the buyers will promptly respond by stepping aggressively into the market and creating a buying tail. Once again, as the market rejects the unfair low, prices will move back up to the value area. If the market accepts these lower prices, selling will continue, dropping prices even lower. This will continue until prices reach an unfair low and buyers step into the market. When the market participants are uncertain about future direction of the market, they tend to limit and cluster their activity to the value area.

**If the market rejects an unfair high or unfair low,
prices will move back into the value area.**

The shape, size, and location of the value area within the day's Profile structure convey to the Profile trader some important information about market activity. The more TPOs that line up at a price level, the greater the acceptance of that level. Value areas that have a large and balanced number of TPOs indicate a market that is in balance. A

value area that has a long and skinny TPOs pattern with less than five TPO prints at any one price level is indicative of an imbalanced market.

Value Area Levels

The value area has a number of key reference points that need to be identified on the Profile chart. The value area on a Profile chart contains 70 percent of the market's trading activity for the specified period. The value area high and the value area low provide the boundaries of the value area. The value area high is the upper limit of the value area for the market data and the value area low is the lower limit of the value area of the market data. These two lines identify the extreme limits of the value area, as seen in Figure 2.3.

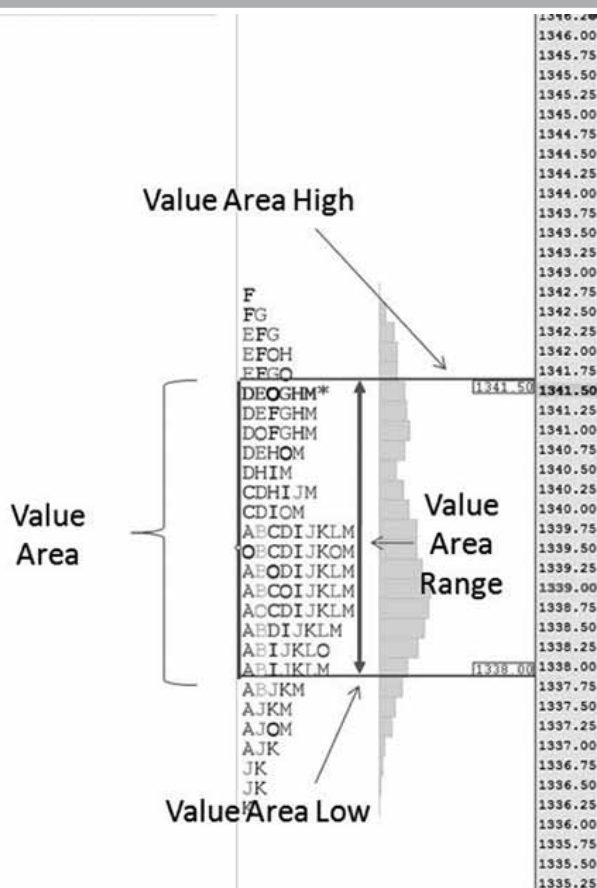
The distance or price range between the lower and upper limits of the value area defines for us the range or the width of the value area. The greater the range, the wider the value area becomes. Since the value area is developed based on real time market data and actual market activity, it is very dynamic. The Market Profile charts allow us to view and track the value area as it develops. A growing or expanding value area indicates acceptance in the market for the directional expansion in the value area. An expanding value area usually indicates the presence of increased or sustained trading volume that is fueling the expansion. A small value area range that is not growing is a sign of an uncertain market, a market with low trading volume that is not committed to any specific direction in the market.

Price Point of Control (POC)

The point of control (POC) illustrated in Figure 2.4 is another key reference point within the value area. Since the value area is calculated based on a normal distribution, there is always a price point that will correspond to the mean in the normal distribution. This price

**Figure
2.3**

Value Area Parameters



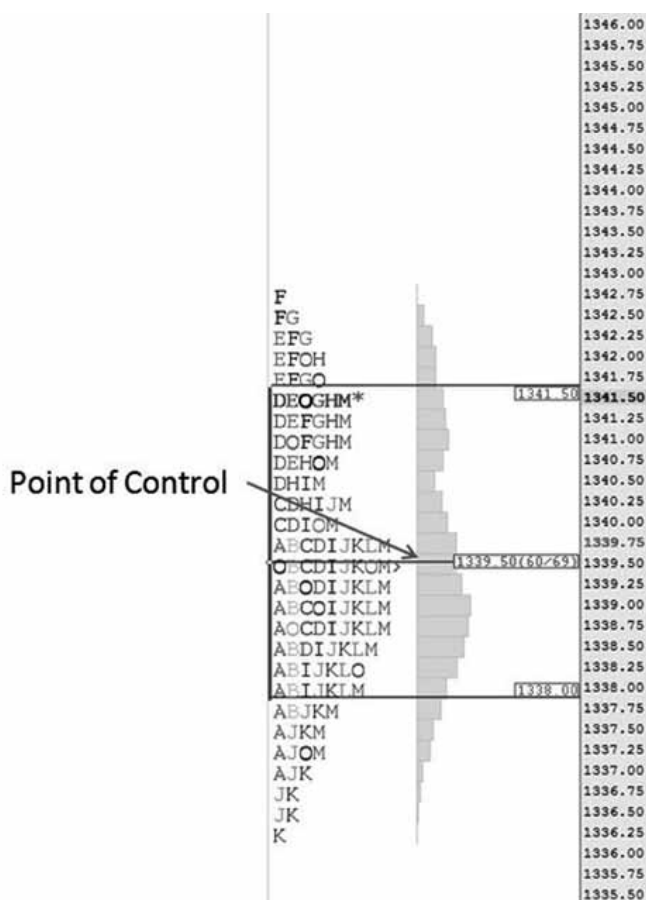
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point on the Profile chart is called the price point of control (POC). The POC is the price point where the market records the most trading activity during a specified trading session. Another way to think of the POC is the point of the most fair price within the value area. It is also the price where the greatest number of TPO prints occur during the session.

The POC is also the price that has the largest count of TPOs during the session. Sometimes, we have several prices within a value area that have an equal number of TPOs, as we observe in Figure 2.4. There are nine TPOs printed at each of the following prices: 1338.75, 1339, 1339.25, 1339.50, and 1339.75. Whenever this event occurs, the

Point of Control

Figure
2.4



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POC is assigned to the price that is closest to the center of the value area. The value of the center is calculated by the following formula:

$$\text{Value Area Center} = \frac{(\text{Value Area High} + \text{Value Area Low})}{2}$$

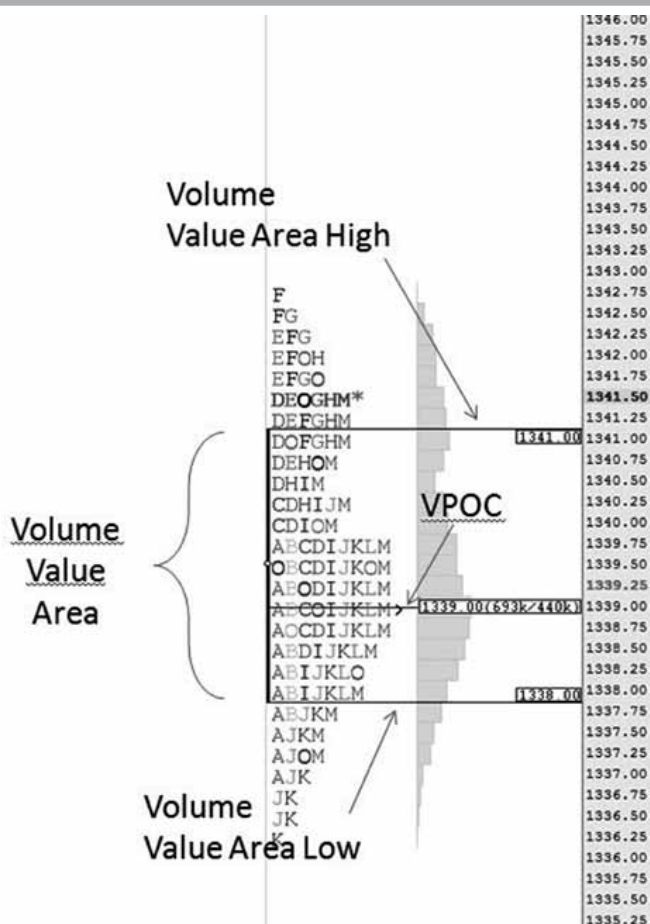
It is important to note that the POC does not always fall at the center of the value area. The point of control is consistently a key price level within the value area. It is frequently visited and tested during a given trading session. The greater the number of TPOs that make up the POC, the more significant it becomes.

Volume Value Area

Just as there is a price value area and a price point of control on a Profile chart, there is also a volume value area and a volume point of control on the Market Profile chart. The volume value area looks at traded volume data rather than traded price data. The volume value area is calculated based on the normal distribution as is the case with the price value area. The volume point of control (VPOC) is identified as the point with the largest volume activity during the session. In the case of the volume value area, all key points are identified

**Figure
2.5**

Volume Area Parameters



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Figure 2.6

Price Value Area

Volume Value Area

Order Type	Price	Volume
F	1345.50	
FG	1345.25	
EFG	1345.00	
EFOH	1344.75	
EEGO	1344.50	
DEOGHM*	1344.25	
DEFGHM	1344.00	
DOFGHM	1340.75	
DEHOM	1340.50	
DHIM	1340.25	
CDHIJM	1340.00	
CDIOM	1339.75	
ABCDIJKLM	1339.50	
ABCDIJKLO	1339.25	
ABODIJKLM	1339.00	
ABCOIJKLM	1338.75	
ACCDIJKLM	1338.50	
ABDIJKLM	1338.25	
ABIIJKLO	1338.00	
ABIIJKLM	1338.00	
ABJKM	1337.75	
AJKM	1337.50	
AJOM	1337.25	
AJK	1337.00	
JK	1336.75	
JK	1336.50	
K	1336.25	
	1336.00	
	1335.75	
	1335.50	
	1335.25	

40

Chapter Two Quiz

1. Market Profile charts are the only charting technique that will provide traders and investors with a clear view of where value is in the market at any given point in time.
 - a. True
 - b. False

2. The Gaussian or normal distribution is the most commonly observed probability distribution in nature.
 - a. True
 - b. False

3. Market Profile charts can visually identify how the market reacts to different price levels.
 - a. True
 - b. False

4. The more TPOs that line up at a price level, the greater the acceptance of that level.
 - a. True
 - b. False

-
5. The value area high and the value area low, once identified for the day, remain the same throughout the entire trading day.
- a. True
 - b. False
6. The point of control on a Profile chart is the price level that has the greatest number of TPOs during the session.
- a. True
 - b. False
7. On a trending day, the value area expands in the direction of the trend.
- a. True
 - b. False
8. The volume point of control (VPOC) is identified as the point with the largest volume activity during the session.
- a. True
 - b. False

-
9. A value area can be identified on a Market Profile chart for any trading session.
- a. True
 - b. False
10. The volume value area and the price value area on a Market Profile chart are always the same for the same trading session.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

3

FINANCIAL MARKET PARTICIPANTS

Financial Markets: An Overview

The term “financial markets” is a very broad and all-encompassing term. It can mean many different things to different people. For our purposes, we will define the financial markets as the arena or the international system that allows for the flow and exchange of capital throughout the world. This definition highlights the international nature of the financial markets and the global flow of capital.

There are financial markets in every corner of the globe. Every major capital in the world has its own financial market. Financial markets facilitate the raising of capital, the transfer of risk, and international trade. A healthy economy cannot survive without a healthy financial market.

In recent decades, the financial markets have become more and more intertwined throughout the world. What happens in Tokyo impacts London, New York, Sydney, and every other corner of the planet and vice versa. The world is increasingly becoming one giant financial global market.

Financial Instruments

There are many different types of financial instruments in the markets. There are stocks, bonds, commodities, money markets, derivative markets, insurance markets, and foreign exchange markets, just to name a few. Illustrating the growth and globalization of the financial markets, in 2010, the foreign currency exchange market (“Forex”) traded approximately four trillion dollars in a single 24-hour period.

There is always a market open somewhere around the planet and it is probably not going to be too long before we will find that all electronic exchanges will be open 24 hours every day. New technologies and advanced communication tools now make it possible for both ordinary individuals and large financial institutions to participate in markets all over the world.

Financial Market Participants

Financial markets also have a wide array of participants. However, to simplify matters we will divide these participants into two major groups. One group we will describe as the “sell-side” participants in the market, and the other group we will identify as the “buy-side” participants in the market. The major financial firms, large financial institutions, and financial companies that issue and originate financial products represent the sell-side. These sell-side participants are

primarily made up of investment bankers, large banks, distributors, brokers, resellers, and dealers.

The sell-side participants often play a dual role in the market. First, they help to create the instruments that will be available in the market and often participate in market trading activities of the instruments that they have created.

They also have another important and critical role in the markets: to provide the markets with liquidity. Traditionally speaking, sell-side participants make their money based on fees and commissions charged to their clients. Their primary source of revenue is the financial services that they provide to their clients. However, this is not to say that these sell-side market participants do not get involved in actual market trading activities. Frequently, they are an active participant in trading activities and they generate a considerable amount of their income from trading.

The other key participant in the financial markets is the “buy-side,” or the investors. These participants make up the large volume buyers of financial products. They are the market participants that bring capital to the market. Typically, these buy-side participants are pension funds, mutual funds, insurance companies, institutional investors, and hedge funds. They play a vital role in the market, providing the capital funding for market activity. Consequently, they have a significant impact on any market that they choose to participate in. They are the participants that have the ability and the wherewithal to move the markets.

Participant Behaviors

The Market Profile helps us to identify various patterns of participant behavior in the market. The “sell-side” and “buy-side” participants have different interests, objectives, practices, and levels of influence on the market.

The “buy-side” participants or large investors have a distinctly different perception of price, time, and value from the “sell-side” participants. These varying perceptions and goals influence their activities and decisions in the market. The Profile helps us understand and identify these different patterns of behavior.

The “sell-side” participants have a short time frame perspective when it comes to their daily activity in the market. The “buy-side” participants tend to have a longer time frame perspective for their activities.

Time and Market Behavior

The trading time frame plays an important role in defining a market participant’s behavior. Time frames create forcing points. A forcing point is a point in time that forces a participant to make a trading decision. To help us study and understand the impact of time on market participants’ behavior, we will break up the market participants into two broad categories. The two categories will be based on their time frame for making trading decisions. The first category will focus our attention on the short-term or intraday participant. The other category will examine the actions and decisions of the long-term participant.

Experienced Profile traders recognize and understand the importance of time and its influence on trading activity. In using the Profile to analyze market activity, the term “other time frame traders” is frequently used to aggregate and describe all traders and investors who trade beyond the day time frame.

The time variable creates the forcing points for both the “day time frame” participant as well as the “other time frame” participant. These forcing points may be self imposed or imposed by the market. If a market participant is strictly a short-term trader or a day trader active during the “day time frame,” they must be flat at the end of the day. This means that they must close all positions prior to the market

close. When the market is about to close, the day traders must make decisions to address any open positions they have prior to the market close. If they have short positions, they will need to cover them. If they are holding long positions, they will need to sell or liquidate their positions prior to the close. The “event” of the market close forces them to make a decision whether they like it or not. Thus, the market imposes a decision forcing point upon them.

The “other time frame” participant, on the other hand, does not have to contend with the same time constraint. The close does not impose or create a forcing point for them. The “other time frame” participants encompass a broad range of time frames. They are not limited to a single trading day and they do not all share the same time frame constraints. Some may have a time frame of a couple of days, others may be a week or two, and in some cases it may be a month or even longer. Nevertheless, the one common element that all other time frame participants share is that they are not restricted to the “day time frame”.

Price and Value Perspectives

Naturally, the time frame factor influences a market participant’s trading decisions and reaction to value in the market. The day time frame participants such as market makers, floor traders, and dealers will trade large positions seeking only small gains on each trade. These frequent large trades generate a decent income even though the profit margin for each trade is quite small. The key to the success of this trading style is the ability to enter and exit large positions quickly. This cannot be done unless there is liquidity in the market.

Short-term buyers and sellers are often trading with each other at the same time at the same price. Both short-term buyers and sellers are looking for price levels with the greatest liquidity. The greatest levels of market liquidity will be found in areas around a fair price. Consequently, short-term trader behavior is typically characterized by their desire to trade at a fair price level. These price levels are associated

with large volume. The presence of large volume allows short-term buyers and sellers to enter and exit positions easily and quickly.

A fair price level is a price level that is acceptable to the largest number of both buyers and sellers.

Since day time frame traders only have a limited time to trade, they cannot afford to trade away from fair price. They need to generate their profit during the day. Consequently, they are frequently trading with other day time frame traders. Most of their activity typically takes place within the value area. The day time frame trader simply cannot afford to stray too far away from fair value in the market.

Even though the other time frame trader and the day time frame trader both exist in the market at the same time, their behaviors and trading patterns are distinctly different. They react differently to market value and different price levels in the market.

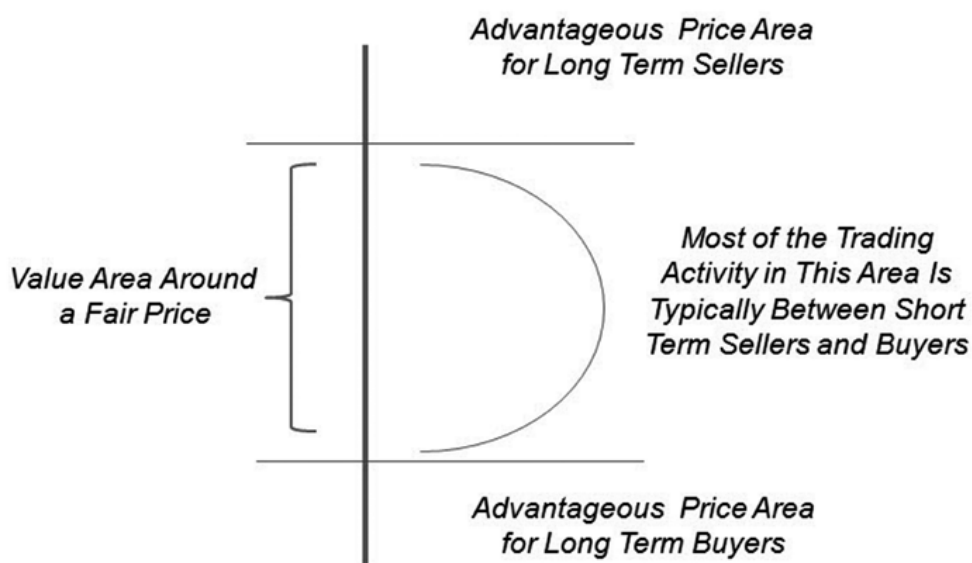
Unlike day time frame traders, the other time frame trader, or the long-term trader, is not looking for a fair price in the market. They are looking for a market opportunity or an advantageous price. They are attracted into the market when value is at an unfair high or an unfair low—in other words, when price is either above or below market value. This is where advantageous prices are usually found on the extremes of a Profile chart. These advantageous prices are typically characterized by low volume. However, the other time frame trader is not looking for volume at that point in time. They will usually buy and hold beyond the day's time frame. They will simply buy as much as available volume will allow them to buy at the unfair low or sell as much as possible at the unfair high. However, as they respond to the unfair lows or highs, the market will quickly move away from these unfair value areas. In comparison to the amount of time spent in the value area, the market never spends much time at these unfair value levels.

These unfair highs and lows are rejected extremes that are characterized by low volume. Only the long-term or other time frame trader can afford to participate at these levels. As Figure 3.1 illustrates, prices that are above the value areas for a session are typically considered advantageous for the other time frame seller, while prices that are below the value area are considered advantageous for the long-term buyer.

The ultimate objective of the market is always to facilitate trade. It does so by auctioning from high to low and low to high. The market moves directionally in search of a price area where trade can be easily facilitated. The short-term trader is always looking for a fair price. His role is to find the areas in the market where a two-sided trade can occur. These are the areas where there is the greatest level of activity.

**Figure
3.1**

Fair Price Area



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

The ultimate objective of the market is always to facilitate trade.

The other time frame trader, on the other hand, facilitates trade by moving the market directionally. The other time frame trader will move markets up or down. This is done by extending the value range either up or down.

Since the other time frame trader is responsible for the way the day's price range will develop, it is important for us to learn to recognize their activity in the market and the footprints that they leave. The other time frame trader does not always enter the market early in the day. Their presence can often be detected through an increase in the level of traded volume.

The other time frame trader helps to facilitate directional moves in the market. When the other time frame trader participates in the market, their buying activity will push prices higher or lower depending on their directional conviction. The extent of the directional price extension will vary based on the degree of their directional conviction.

Chapter Three Quiz

1. In recent decades, the financial markets have become intertwined throughout the world. We now live in one global economy.
 - a. True
 - b. False

2. “Sell-side” participants in the financial markets are primarily made up of short sellers.
 - a. True
 - b. False

3. The major financial firms, large financial institutions, and financial companies that issue and originate financial products represent the “buy-side.”
 - a. True
 - b. False

4. A forcing point is an emotional point in time that forces a participant to make a trading decision.
 - a. True
 - b. False

-
5. The investment or trading time frame factor influences a market participant's trading decisions and reaction to value in the market.
- a. True
 - b. False
6. Large volume trading or liquidity in the market makes it possible for short-term buyers and sellers to enter and exit positions easily and quickly.
- a. True
 - b. False
7. Advantageous prices in the marketplace are typically characterized by low volume. They do not remain available in the market for very long.
- a. True
 - b. False
8. All traders and investors seek a fair price in the marketplace for their positions.
- a. True
 - b. False

9. Directional price moves in the market are determined by large volume participants.

a. True

b. False

10. Short-term and long-term traders are always trading with each other.

a. True

b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

4

AUCTION MARKETS

When we think about auctions, many different types of images come to mind. Some individuals will immediately think of Sotheby's or Christie's fine art and antique auctions while for others an auction may conjure up a mental image of a cattle auction at a country fair. The younger generations will most likely immediately think of an eBay online auction. Others will envision government auctions, held for surplus, seized, and forfeited assets. After all, the U.S. treasury department alone holds approximately 300 auctions every year.

The key point here is that in thinking about auction markets, rarely does anyone ever associate auctions with the financial markets. Yet, almost all electronic financial markets trade based on an auction market, making it paramount for anyone interested in becoming a successful trader or investor to study and understand how the financial auction markets actually function and operate.

In traditional auctions, an auctioneer conducts or facilitates the auction process. Typically, the auctioneer will start the auction process with an open price. The auction participants respond to the open price. If the open price is perceived to be a reasonable value, the buyers will promptly respond by accepting it. The buyers' acceptance of the price will prompt the auctioneer to raise the offered price. The auctioneer will continue to move prices higher until there are no more buyers that are willing to buy at that high price level. At that point, the auctioneer will quickly pronounce the item sold to the highest bidder.

If you have ever witnessed or participated in a live auction, you have undoubtedly observed this dynamic in action. Movies will often feature this auction dynamic as part of their plot to demonstrate the competition, the emotions, the drama of the event and the human behaviors associated with the auction process. Auctioneers are not always successful at lifting the open bid. Sometimes, the market does not respond favorably to open price and the auctioneer is compelled to lower the asking price to a level that attracts auction participants. At a recent property foreclosure auction, the initial open price for a million dollar home started at \$650,000. No one was interested in the property at that price. The auctioneer lowered the opening bid to \$600,000. There was still no interest in the property. He continued to drop the bid lower to \$550,000, then to \$500,000, \$450,000, \$400,000 and so on until a buyer finally stepped forward at \$350,000. Interestingly enough, at this point, other bidders started to participate in the auction, and the price began to go up. It moved from \$350,000 all the way up to \$575,000. This example illustrates how quickly things can change in any auction and how prices will adjust to the forces of supply and demand.

Financial Market Auctions

The financial markets use the same auction theory and principles as traditional auctions. However, the mechanics of the auction are quite different. The financial auction market is continuously responding to the available orders in the market. Once the market opens for an instrument, there are usually a large number of orders already in place on the order book. The market auction will move up and down in a price ladder to facilitate trade and fill as many orders as possible. The response of the market participants determines the direction and pace of auction activities.

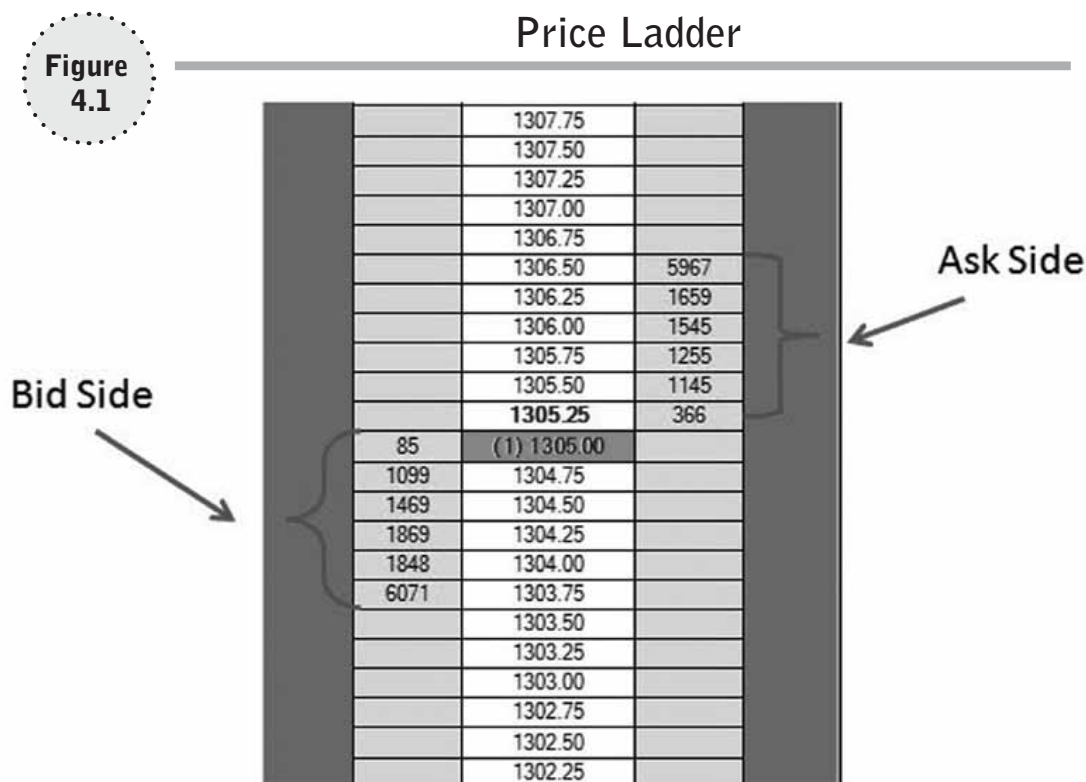
Financial markets use the same auction theory and principles as traditional auctions, but the mechanics of the auction are quite different.

The order book is an important element in the auction of any instrument. There are three different levels of access to the actual order book of any given financial instrument. Level I access provides the number of bid orders and ask orders at the current price. Level II access provides a larger but still limited view of the order book. Level III access includes an open view of the entire order book; this Level III access is only available to some market makers and dealers.

The Order Book

The order book is the roadmap for the financial auction process. The number and size of orders in the book determines the direction and speed of the auction process. Market participants that are interested in buying will place their orders on the bid side of the book, while sellers will place their orders on the ask side. On the price ladder in Figure 4.1, we can see that there is demand for 85 contracts at the bid

Figure 4.1



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

price of 1305.00. This demand could be one single buyer or the total demand from a number of different buyers in the market. The bottom line is that we have 85 buy orders sitting at a bid price of 1305. The ladder also shows that we had one contract that already sold at this bid price of 1305.00. The number one that appears between two brackets next to the left side of the price highlights the last number of contracts traded at that price.

In Figure 4.1, on the ask side, we have 366 contracts that are available for sale at 1305.25. The sellers are offering to sell at 1305.25. From the displayed numbers on the ladder, we can learn that one seller has agreed to drop down to the bid to sell a single contract at 1305. Since there are more contracts for sale at the ask than there are buyers at the bid, the auction is likely to drop prices slightly to facilitate trade. After all, we have bid orders to buy 1099 contracts just one tick below

at 1034.75. As prices drop a little lower, more sellers will probably lower their ask to try to sell some of their inventory. As more sellers drop their ask price, the auction will drop the bid lower yet. The movement lower will continue until there are enough buyers to absorb the supply that the sellers have offered to the market. At this point, we have a balance between sellers and buyers. The markets will begin a new move as soon as the balance begins to tip in favor of either the buyers or sellers.

The auction market is constantly moving to facilitate trade in the market. Increased buying will lift prices higher until the number of buyers no longer exceeds the number of sellers. Once that level of equilibrium or balance is reached, the auction will once again move in the opposite direction.

The dynamics of the auction market are always subject to change at any second. As soon as buyers or sellers begin to enter the market with sufficient volume, the auction will immediately respond by either taking prices higher or lower. As prices move up, the auction usually brings in more buying. As prices move down, the auction will usually bring in more selling into the market. A directional market move is exhausted as soon as a point of equilibrium is reached between buyers and sellers. The auction market is continually moving in search of the opposite of what it finds. It takes sellers to shut off a buying move up and buyers to halt a selling move down.

The auction process provides the market with the organizational structure and framework for all market transactions. The Profile chart provides us with a visual representation of this activity.

Bid/Ask Dynamics

The aim of the auction market is to identify the two major conditions of the market known as balance and imbalance. These two conditions can also be described as consolidation and trend. The market

an auction provides an active negotiation process between buyers and sellers. The outcome of the negotiation will determine the condition of the market.

At any given point in time, there are usually many different buyers and sellers in the market. Various buyers and sellers have different perspectives of value in the market. The auction works to facilitate trade among all market participants. The objective of the auction is to close all transactions that are acceptable to both buyers and sellers in the market.

Traders need to know that sellers will offer to sell to the market at the ask. The ask is the price that a seller is demanding from the buyer to make the sale. Sometimes the ask is also referred to as the offer. The terms “ask” and “offer” are interchangeable for the price that a seller is willing to accept to make a deal.

On the opposite side of the sellers, we have the buyers. The buyers present a bid price to the sellers. The bid price is the amount that the buyer is willing to pay to the seller to make a deal. If the bid and ask prices are not equal, no transactions will take place. The difference in price between the bid and the ask price is known as the spread. The spread is the gap in price between the seller’s offer and the buyer’s bid.

If the buyer’s bid price and the seller’s ask price are not equal, no transactions will occur.

At any given point during market hours, there is always a bid and an ask price for any traded financial instrument. An open market is a live auction process in action. In an open market, the level of activity for an instrument is determined by the number of bidders and sellers on the order book for that instrument. The greater the level of bid and ask activity, the greater the liquidity for the instrument.

Once a trader understands the auction process, they are able to study the activity in the market. If the bidders are willing to lift their bid

and accept the ask price, this indicates that the buyers are aggressive in the market. When buying activity is aggressive and sustained with volume, prices will undoubtedly move higher. When the buyers agree to buy at the ask, they become the aggressors and they are in control.

However, if we observe that the sellers are willing to drop their ask prices and accept the bid prices offered by the buyers, the market sentiment is bearish. As more and more transactions take place at the bid, the sellers are in control. They are eager to sell and their eagerness pushes prices lower and lower. As discussed earlier, at some point, a transition will occur and control will be transferred to the buyers.

Order Flow

The order flow in the market is the sequence of transactions that take place in the market. The order flow is the manner in which the auction facilitates trade. In tracking the order flow, we are able to identify, at any given point in time, who is in control and at what price level.

The pattern of the order flow also gives us a number of insights as to how the auction is facilitating trade. As we look at the order flow for a specific period, we can determine whether there is more trading volume at the higher prices or more trading volume at the lower prices of the auction range for the specific period. Moreover, we can look at the breakdown of this trading volume. If the bulk of the trading activity is taking place at the bid side on the lower end of the range, the market conditions are bearish for that specific period of time. It is very important to keep in mind the time perspective. The order flow analysis examines the current market conditions and the current auction activity at a specific point in time.

As traders examine and analyze the order flow, before they embark on any long trades, they should consider if there will be other traders who will be willing to buy at a higher price than the current price,

and thus keep pushing the price higher. Moreover, it is important to think ahead and anticipate at what point in time these traders will appear on the market. As prices rise in the auction, will there be an adequate supply of aggressive buyers at the higher price levels? Traders should also think ahead and determine at what point new sellers will start to come into the market. As prices move up, at some point the market will be above value or overbought.

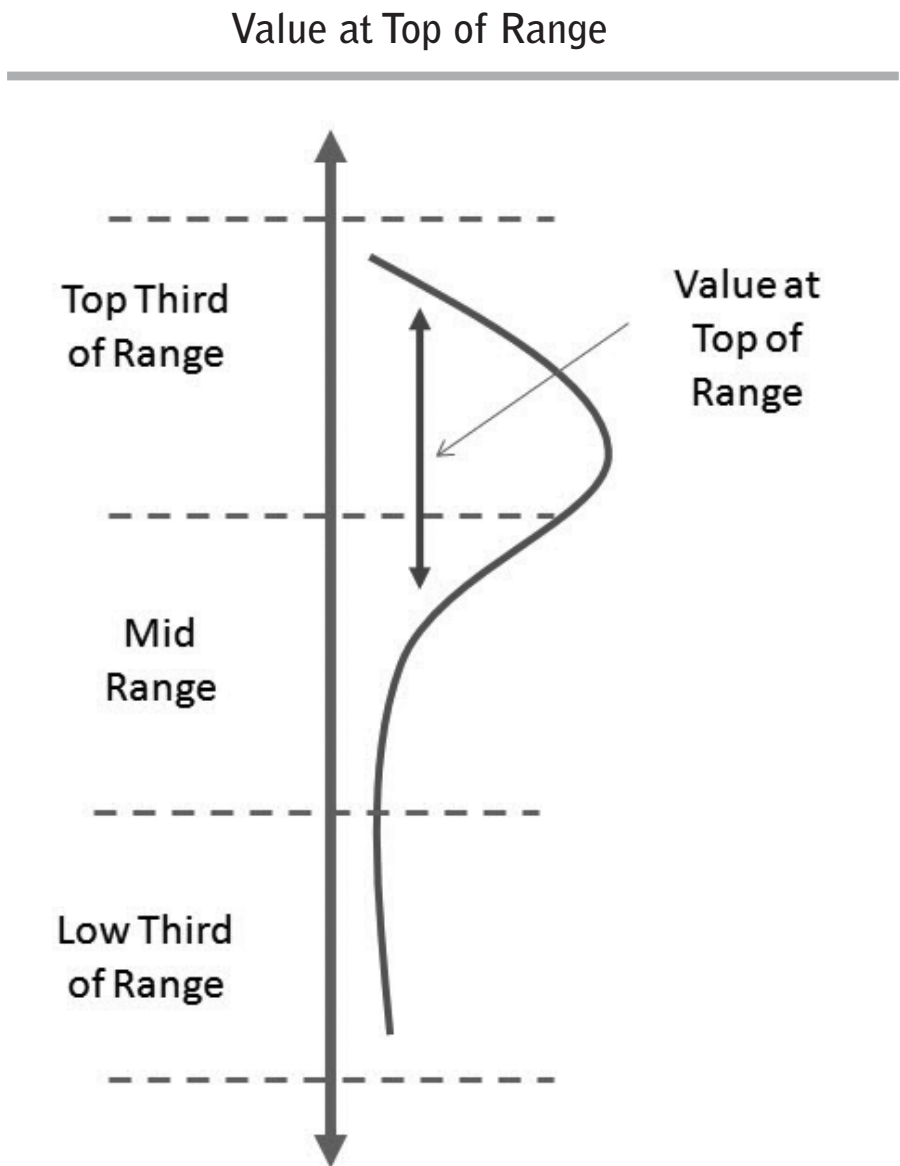
Once sellers start to offer a healthy supply to the market, the selling will shut off the buying activity. This in turn will cause the market to reverse direction and prices will start to move lower. When the market reaches an extreme high in the trading range, sellers will recognize that the market is overbought and they will begin to accept the buyer's bids.

As soon as sellers start to supply at the bid, the price move up will end. This in turn causes the market to reverse and move lower. The up auction ends and the down auction begins towards fair value. Once traders understand the auction process and the order flow, they are able to think ahead of each move and project where it might end. They are also able to better time their trade entries and exits.

Parameters of the Auction Process

The market auction is taking place in every time frame. As the auction embarks on a directional move, it establishes the parameters of the auction for a specific period of time. Each directional market move will have a specific range. The range will include a value area, an unfair high value, and an unfair low value. The unfair low will be at the low end of the range and the unfair high will be at the top of the range. These unfair levels represent the excesses or extreme parameters of the move. The value area will usually be in the middle of the range. However, there are situations where the value area may be on the high or low end of the range, as we can see in Figures 4.2, 4.3, and 4.4.

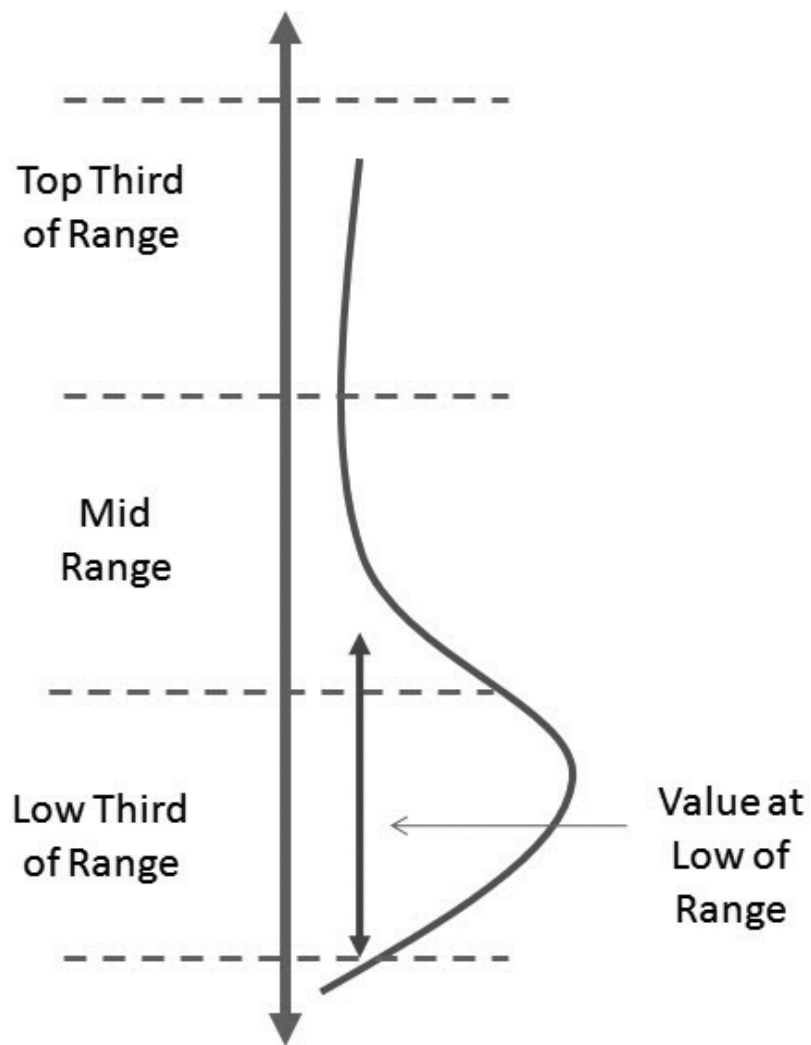
**Figure
4.2**



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

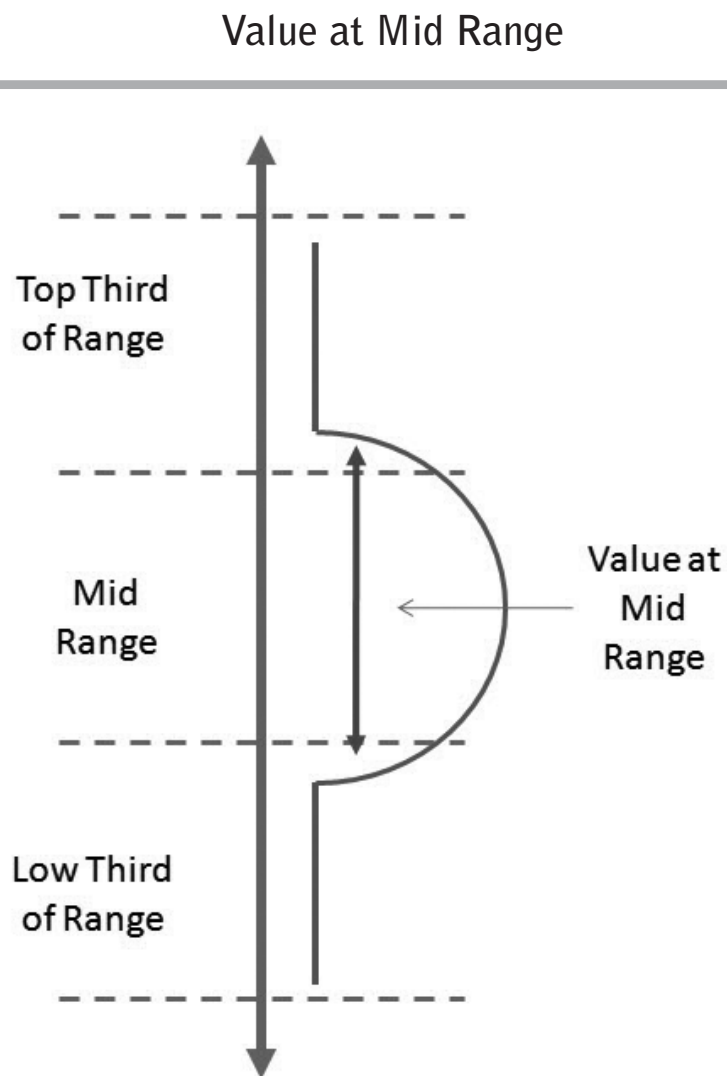
**Figure
4.3**

Value at Low of Range



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

**Figure
4.4**

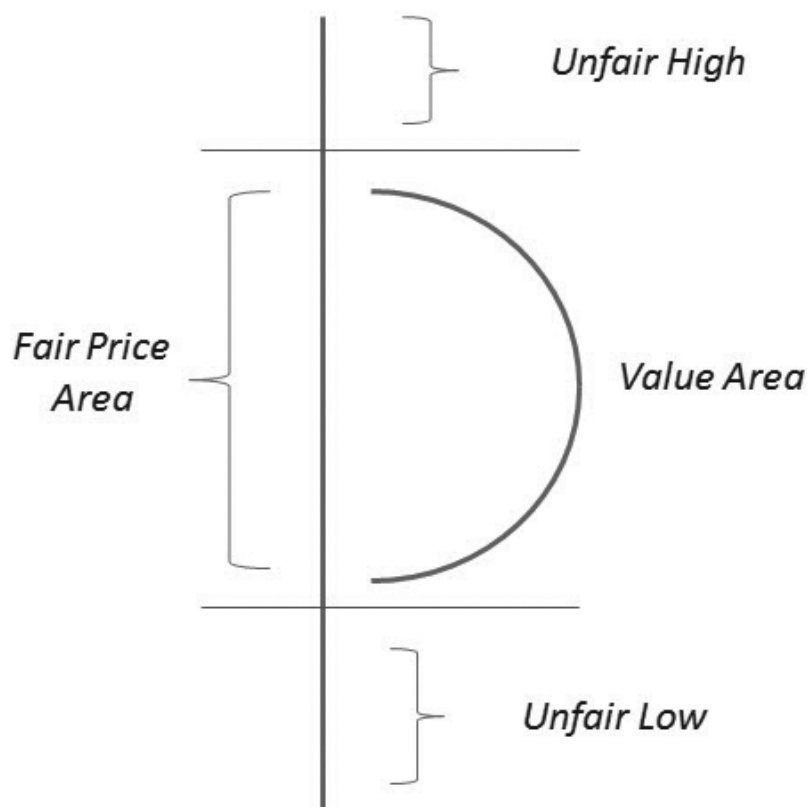


For a closer look at this chart visit www.traderslibrary.com/TLEcorner

Once the auction market identifies a range with an unfair high and an unfair low, it begins to negotiate within the identified range to establish where value will occur. The market trades between the established high and the established low in search of an accepted value area. Once a value area begins to develop in the range, the market will start to probe above and below the new value area in search of the next trading range.

**Figure
4.5**

Key Parameters of Auction Range



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

Once the trading range for the session is established, one of two things may happen. The market will either continue to trade within the range, or the auction will drive prices above or below the established range, only to create a new auction range.

In every new auction range, there are always three key parameters.

1. Value area
2. Unfair high above value
3. Unfair low below value

(See Figure 4.5)

Market Activity

Market activity is the response of market participants to the trading range created by the auction process. Market activity will either stay in the range or it will auction away and move out of the defined range for the session. If the auction stays within the range for the session, as traders, we simply want to sell the highs and buy the lows of the range. If we sell the highs of a session range, we look to take our profits at the mean or at the POC on the Profile chart for the specified range. When we buy the lows, we should also be ready to take our profits as soon as the auction returns to fair value at the POC for the session.

If we observe an increase in buying volume above the high of the range for the session, this is an indication that the market may be ready to break out of the range. As buying volume continues to increase, the auction will move prices higher and a breakout will occur. Similarly, if we observe large selling volume at the low end of the range below value, it is highly likely that the market will auction lower, and a breakout will occur to the downside.

If we examine market activity for any specific unit of time, we will always observe that the three parameters of value, unfair high, and

unfair low will be part of every range. These three price parameters define the boundaries of the negotiation process for that range.

The three price parameters—value, unfair high, and unfair low—will be a part of every range.

The auction negotiation process always establishes the parameters for the range. Once the range is established, the market comes into balance and rotates around a price that will either be in the upper third of the range, in the middle third, or the lower third of the range.

The perceptions of value in the market determine the extent of any directional move, where the market becomes balanced, and how long it stays in balance.

Trading Opportunities

Trading opportunities frequently appear when there is a difference in opinion about where value is in the market. This is one of the major factors that makes Profile charts an incredibly powerful analytical tool for traders. When a major market participant or a group of participants have a different perception of value than other participants in the market, these differences immediately become apparent in the development and the structure of the Profile chart. Trading opportunities will usually become evident when price moves away from value.

Profitable buying opportunities begin to evolve above value and have a much greater probability of success when they are supported by aggressive buying volume. The increase in buying volume will provide the auction process with the necessary fuel to take prices higher and higher.

Similarly, selling opportunities also present themselves when many participants believe that the market is overbought or overvalued. Once aggressive selling is identified below value, selling opportunities become attractive. As a seller, one needs to have the confidence that there will still be other sellers in the market at lower prices.

When there is a common and shared perception about value in the market, the market moves in a very limited range around value. Consequently, on the Profile chart we will observe an accumulation of trading volume around the area of shared perception of value.

Market Development

Market development is a result of the auction process and the different perceptions of value. The auction develops by moving from balance to imbalance and imbalance to balance. It is an unbroken sequence of activity. The sequence of activity is made up of long-term and short-term distributions based on the different time frame perceptions in the market.

A market session can be broken into several short-term intervals or periods. We can break a day session to hourly sessions. We can further break down each hour into half-hour increments; each half hour could be broken down to two fifteen-minute sessions. In turn, each fifteen-minute session can be broken down to three five-minute sessions, and so on.

Just as we can break down each session into smaller units or parts, we can also combine several different sessions together to produce a larger or longer-term composite of the market activity. We can combine the activity of five separate trading days into a single weekly session. We can also combine the activity of four separate weeks into a month and so on.

Short-term units of activity help us to see the auction and track the order flow of short-term moves. This allows us to capture short-term trading opportunities. Long-term sessions help us to understand the long-term moves and the long-term activity distribution in the market. This allows us to capture long-term trading opportunities in the market.

At some point during a trading session or a given time period, the market becomes efficient. When this occurs, the market will be ready to begin something new. As each short-term time period comes into balance, it eventually tips over to one side or the other, creating a potential trading opportunity. These changes occur in the market because of the capital flow in or out of the market. As capital flows into the market, there is increased buying volume, while heavy selling takes place when capital is taken out of the market.

Capital Flow

The auction process manages the dynamic process of capital flow. The auction activity that we have discussed occurs both in the short term as well as over long periods of time. Regardless of the time frame that you choose to trade, keep in mind that the more balanced the market becomes, the more unstable it is. The more balanced a market becomes, the more efficient it is; the more efficient it is, the more ripe and ready it becomes for a move. That is the auction process at work.

Always remember that the more balanced a market becomes, the more unstable it is.

Understanding the auction process and how a distribution develops enables a trader to interpret current market activity. As distributions or trading ranges develop, they create key reference levels based on

the three auction parameters. These parameters often act as support levels for a move up or resistance levels for a move down.

To identify profitable opportunities in the market, traders need to monitor the Profile chart developments, identify where distributions occur in the range, and where the shifting of capital takes place. Buyers will typically come into the market at unfair lows, while sellers become aggressive at unfair highs. Sellers and buyers will both be exchanging positions at the value area. The Market Profile chart allows us to clearly see this market activity as it happens.

As capital moves in and out of the market, it disrupts the balance of the current distribution and can thus shift price control in the market. Buyers represent capital coming into the market; sellers represent capital leaving the market. Who is in control is measured by the amount of capital at different or specific price points in the range. Sometimes aggressive buyers will step into the market at a value high and the inflow of buying capital will shift value even higher. The trading range will extend higher.

Understanding the market's time-frame organization and the role value areas play in the market activity is critical for profitable trading. Profitable trading requires an understanding of the market auction process. The market auction process provides the framework for knowing what information to look for and how to interpret the information to make better-informed trading decisions.

The market's dual auction mechanism uses price as a tool of discovery. Price is employed as the market's test probe. As the market explores various price levels higher or lower, the market participants respond and react to the probe, thus creating the development in the market. The development will vary according to how the market participants react. Price rejection will appear in the form of buying or selling tails. Acceptance will generate new activity and start a new trading range. This is the auction cycle that we are continually watching and analyzing in the marketplace.

Chapter Four Quiz

1. Auction markets are designed to obtain the best market price for both the buyer and seller.
 - a. True
 - b. False

2. In a market auction, buyers will only buy at the bid price and sellers will only sell at the ask.
 - a. True
 - b. False

3. The dynamics of the auction market can change at any point in time during a trading session.
 - a. True
 - b. False

4. In a bearish trend, the buyers will be buying at the ask.
 - a. True
 - b. False

-
5. Once sellers start to offer a healthy supply to the market, the selling will overtake the buying activity.
- a. True
 - b. False
6. Once the auction market identifies a range with an unfair high and an unfair low, it begins to negotiate within the identified range to establish where value will occur.
- a. True
 - b. False
7. When a short-term trader buys at the lows, they should be ready to take profits as soon as the auction returns to fair value at the POC for the session.
- a. True
 - b. False
8. Trading opportunities frequently appear when there is a difference in opinion about where value is in the market.
- a. True
 - b. False

9. When large amounts of capital flow into the market, there is increased buying volume, while heavy selling takes place when capital is taken out of the market.

a. True

b. False

10. The market's dual auction mechanism uses price as a tool of discovery. Price is employed as the market's test probe.

a. True

b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

5

ANALYZING THE OPEN

An open is a fresh start and a new beginning for any trading session. Whether we are looking at a day, an hour, or five minutes, the open price for any of these sessions is an important reference point to track as the market auction process develops.

Naturally, the longer the time frame for the session, the more significance the open will have. Our analysis in this chapter will focus on the open price for a day session. It is important to note that there are some instruments that trade based on a 24-hour market with different active day sessions.

The open for the 24-hour period may not always be self-evident. Consequently, as we study the open we may want to break up the 24-hour period into key trading sessions based on activity levels. There are three major trading day sessions during any 24-hour period. The sessions follow the sun as it rises in the east. The Asian

market session opens and it is followed by the European session. As the European session winds down, the U.S. day session begins. The chart examples that will be examined in this chapter will use the U.S. trading session as the day's time frame.

As we examine the open for each day, we will be conducting two different studies of the open price for the day. In the first phase of our analysis, we will compare the new day's open price to the prior day's range and distribution. In the second phase of our analysis, we will examine the early development of the price that immediately follows the day's open. Both of these studies will help us to gain some insights into the day's development and the potential trading opportunities for the day.

Today's Open Price Versus Yesterday

Once a new trading day begins, the open price will fall in one of the following three possible locations relative to the prior day's distribution:

- a. The new day's open price is inside the prior day's value area.
- b. The new day's open price is outside the value area but inside the prior day's range.
- c. The new day's open price is outside the prior day's range.

Each of these potential outcomes requires a closer examination and careful analysis. We will begin our discussion by looking at a new day's open that falls within the prior day's value area.

Open Price Inside Prior Day's Value Area

When a new day's open price is still within the value area of the prior day, the market remains in a state of balance. Market participants are still comfortable trading in the same value area as that of the prior

day. Upon scrutiny of the exact location of the open within the value area, we can usually gain some additional insights about potential market activity for the new day.

The open price may be in the upper half of the prior day's value area, or in other words, the open price will be above the prior day's POC but below its value area high. The prior day's POC and value area high are two key reference points for the new day. If price drops lower to the POC and the prior day's POC level provides support, prices will then move higher to test the value area high of the prior day.

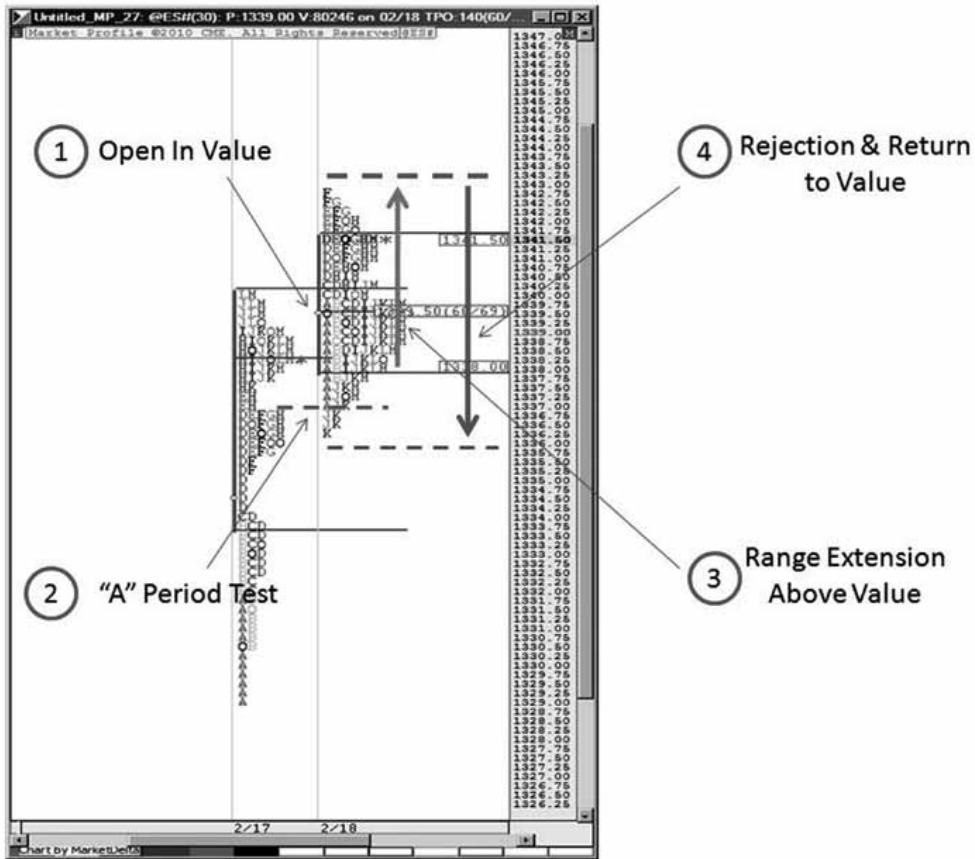
If the open price happens to fall in the lower half of the prior day's value area, the two key reference prices become the POC and the value area low from the prior day. Sometimes, although not often, the new day's open price will fall right at the POC. In this case, our initial two key reference points become the prior day's value area low and value area high.

As we monitor the day activity and price development, the key reference levels will help us to identify whether the market will continue to accept the prior day's value or if the market will reject the prior day's value and break out above or below the prior day's value limits.

In Figure 5.1, we have two Profile charts for two consecutive trading days of the ES mini future contracts. In looking at the price development for the ES mini on Friday, February 18, 2011, we will note that the ES mini opened the day at 1339.50; this price was in the upper half of the prior day's value area. This open price was only two ticks below the value area high. Yet, at the open, the market was unable to break out above the prior day's value area high, indicating that the market was not ready to move outside the prior day's value. During period "A," or the first half hour of the new trading day, the market continued to facilitate trade lower into the prior day's value area.

**Figure
5.1**

Open Within Prior Day's Value Area



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For a closer look at this chart visit www.traderslibrary.com/TLEcorner

The market pierced lower through the prior day's POC, but found buyers or a support level at 1336.75, the midpoint of the prior day's value area. Once this support level was found, the auction market reversed and prices headed higher to test the value area highs once again.

The buyers extended the range to the upside and managed to push prices outside of the prior day's value high. However, as the market auction probed higher, it encountered sellers at 1343.26 and the up move was rejected. The auction then reversed and prices returned once again to the prior day's value area.

Nevertheless, the new value area for the day was established higher than the prior day's value area and the day actually closed above the prior day's value area high. The auction has found and identified a new area of value in the market.

Open Price Outside of Value but Inside Range

When the new day's open price is outside of the prior day's value, but still inside the prior day's range, we are starting the day at an imbalance. The market has broken out of the prior value area. If the open is below the value area low, the market may continue lower. However, if the open price is above the value area high, the market has broken out higher and may continue the move higher. The key questions that need to be answered are whether the market will accept this breakout or if the market is just temporarily trading at an unfair high or low and will shortly return to fair price within value.

**The key questions that need to be answered are:
will the market accept this breakout? or is just
temporarily trading at an unfair price?**

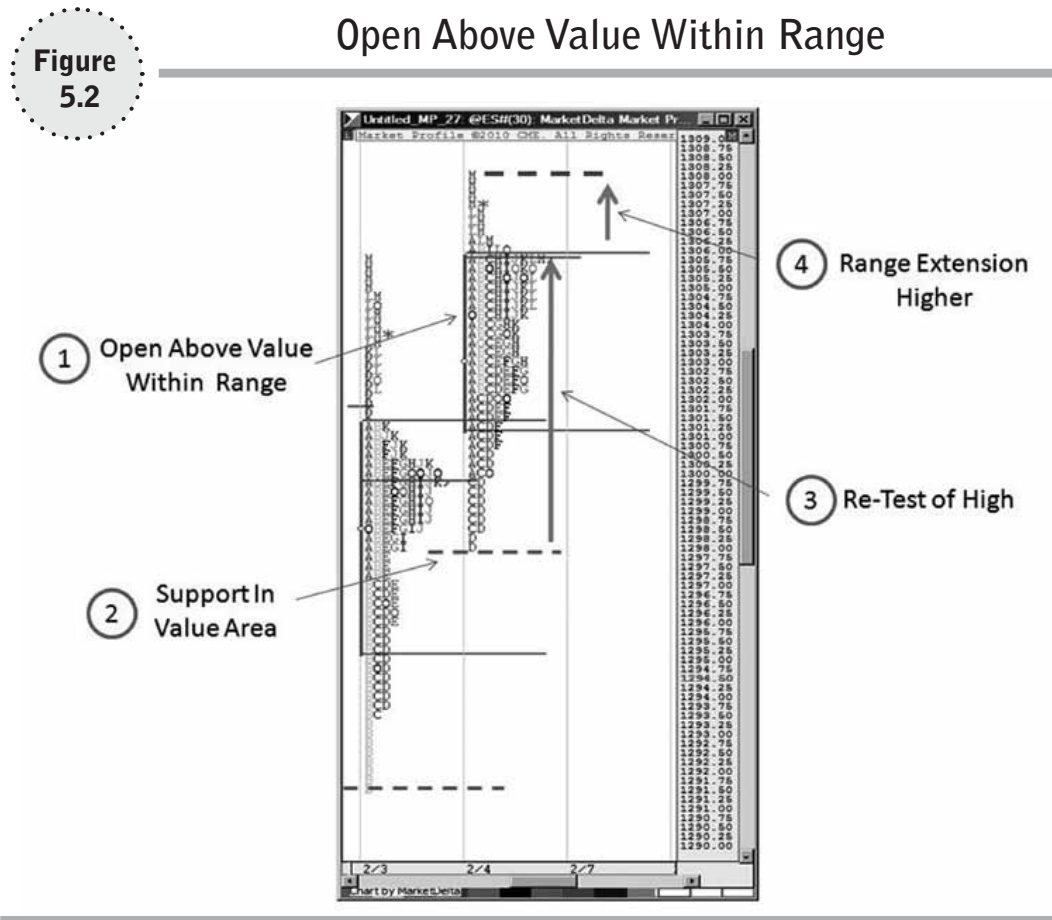
The answer to this critical question is simply obtained by monitoring the auction process and the order flow at our key reference levels. When the open price is within the range but below the value area low, the sentiment is bearish. If the market accepts the breakout to the downside and continues to move lower, the prior day's value area low should provide a level of resistance.

However, if the open is at the top area of the range and above the value area high, the sentiment is bullish and prices may be inclined to move higher. If the breakout to the upside is accepted, the value area high will become a support level.

If these reference levels do not hold as support or resistance, look for the prices to return into the value area and return to a state of balance in the market.

In the Profile chart in Figure 5.2, the reader will note that the market opened above the value area, but within the range of the prior day. On Friday, February 4, 2011, the ES mini opened at 1304.25. This open price was above the prior day's close and value area high. Since we are away from value, the market is imbalanced. When the market is imbalanced, prices are probing or exploring a new price range.

An auction price probe may be met with acceptance or rejection. If the market accepts the new range, the market will continue to



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facilitate trade in the direction of the new range extension. However, if the market rejects the new range, prices will promptly return to the prior value area. On February 4, during the first half hour period of trading, price dropped back below the value area high and found a resting spot at the prior day's POC. We also observe that there are approximately 17 TPOs below the open price and seven TPOs above the open. At the open, the market obviously rejected the move up and quickly returned to the value area.

In the second half hour of trading or during period "B," the market unsuccessfully attempts to test the early high set during the first period of the day. Due to the market's failure to move higher in period "B," the market returns back to test the lows within the value area in periods "C" and "D." The market finds buyers or support at the mid range of the prior day's value area. The auction then begins to reverse direction and prices start to move higher to re-test the earlier highs. The market manages to climb up above the value area high of the prior day.

Prices traded above the open and continued moving up, extending the prior day's trading range by a little over two points. We did not have a directional day, but we still ended up with a value area that is above the prior day's value area and a close that is higher than the prior day's session.

Open Outside the Prior Day's Range

An open price that is outside the prior day's range is a clear indication that the market is imbalanced, yet an open above the range may at times seem somewhat confusing. The market opens in a new territory and seems uncertain about direction. However, in reality, we should recognize that prior to the open, earlier market activity had already pushed prices directionally outside of the prior day's range.

This movement that pushed prices away from the prior day's range would not have occurred without some involvement of the other-

time frame trader. Since the open outside the range can be either above or below the prior day's range, we need to start by identifying whether it is the other time frame sellers or buyers that have influenced the market.

If the open is below the prior day's range, it is the sellers that have influenced the markets. If the open price is above the prior day's range, the other time frame buyers are the culprits. The next question that has to be addressed is whether the other time frame participant (seller or buyer) still has the conviction to continue the directional move that was started prior to the day's open.

If the open is below the prior day's range, the sellers have influenced the markets. If the open price is above the prior day's range, it was due to the other time frame buyers.

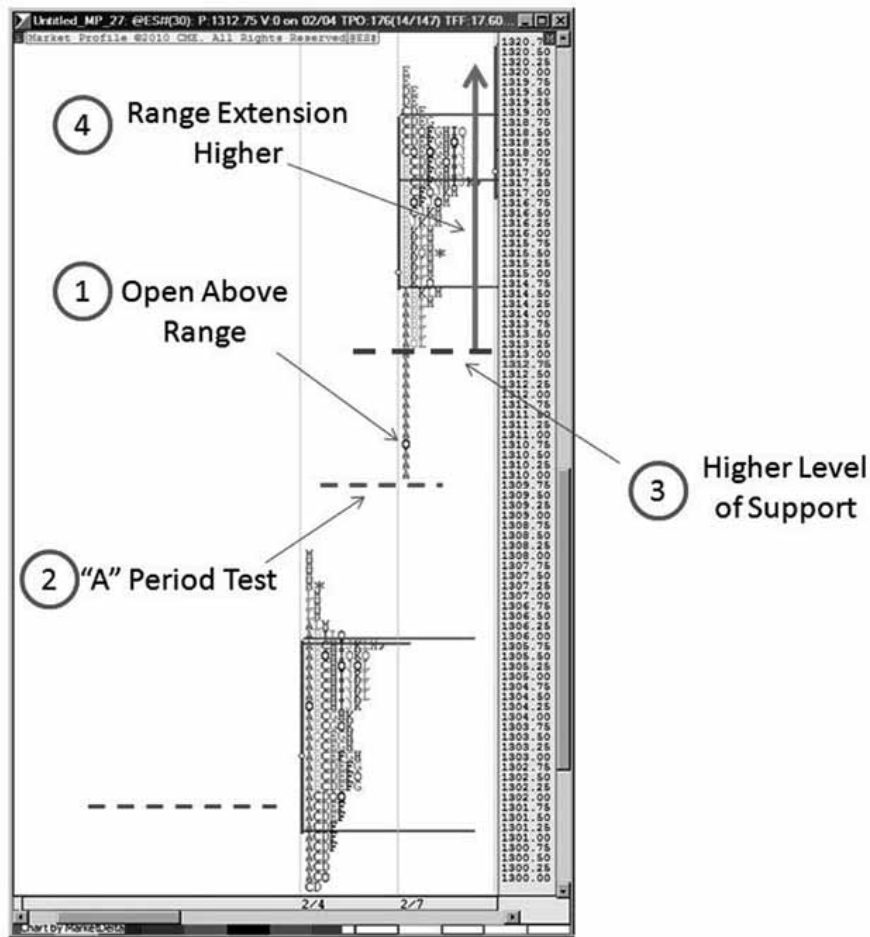
Since the market has in fact opened out of balance, there is a good chance that the directional move will continue. Nevertheless, we should never jump to conclusions; we still need to look at how the market develops at the open to make an accurate assessment of the directional conviction.

In our prior discussions, we have emphasized the importance of volume for the continuation of a move. If we can identify the presence of volume to support a continuation of the move that began prior to the open, we can capture a trading opportunity in the direction of the apparent move.

In Figure 5.3, once again we have two consecutive Profile charts for two consecutive trading days of the ES mini. The Profile chart for Monday, February 7, 2011 opens at 1310.75. This open price is about two and half points above Friday's trading range. This open price was also 4.75 points above the prior value area high for Friday, February

**Figure
5.3**

Open Outside Prior Day's Range



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4, 2011. It is a new day and a new week; the market is trading in a completely new range that is outside the prior trading day's range.

The other time frame participants have obviously pushed prices higher and the sentiment in the market is bullish. If we take a close look at the trading range of the first period "A," we will find that there are about 15 TPOs above the open price and only three TPOs below the open. This reinforces the bullish sentiment and the conviction of the buyer.

Furthermore, the second period “B” opens in the top third of “A” period’s range and never drops lower. In fact, it creates a new higher support level at 1313.00. This would be a great opportunity to initiate a long trade.

The market continues to push higher and eventually reaches a high of 1320.25 for the day. The day develops a new value area that is well above the prior day’s value area and actually closes about two points above the support level of 1313.

An open outside the prior day’s range can often offer some profitable trading opportunities. However, it is always prudent to analyze the price development after the open to validate the presence of conviction for the move.

Types of Opens

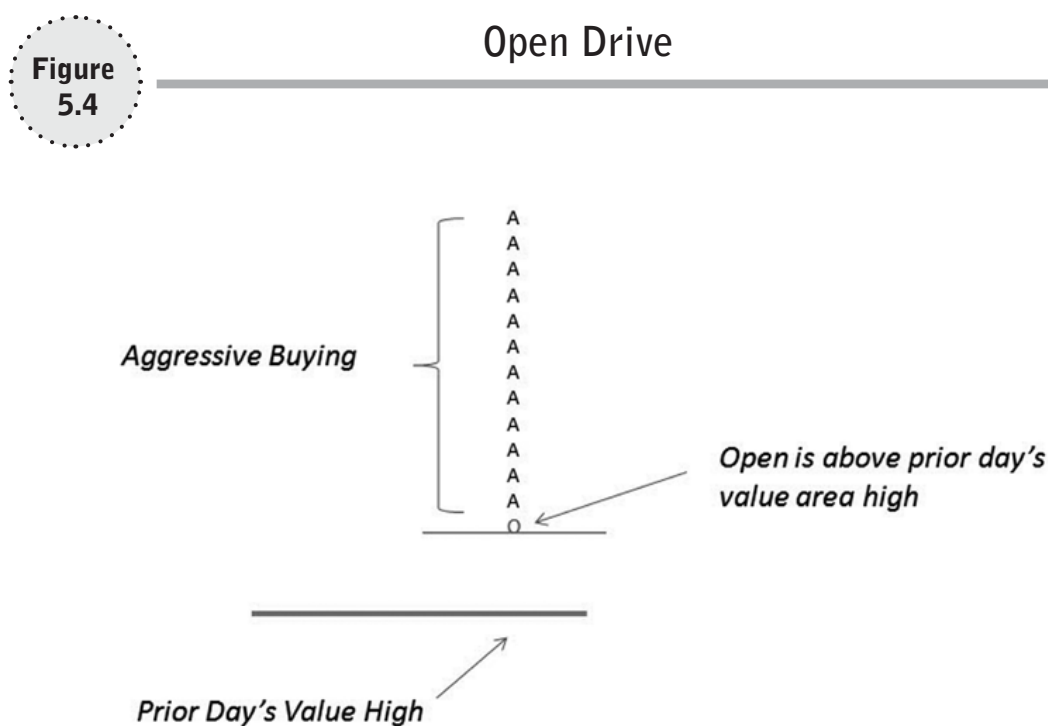
Since we have now had an opportunity to review the day’s open relationship to the prior day’s distribution, we are ready to examine and study the various types of price development that often occur at the open. In his book *Mind over Markets*, James Dalton identifies and classifies four common price behaviors that occur at the open. The following are Dalton’s four different types or categories for the open:

1. Open Drive
2. Open Test Drive
3. Open Rejection-Reverse
4. Open Auction

The Open Drive

The open drive is the strongest and most definitive type of price movement at the open. The market opens and price immediately takes off in one direction, much like a racecar driver who keeps their foot on the accelerator pedal as soon as the start pistol is fired. In an open drive, prices race in one direction without looking back. This is generally created by the other time frame traders' volume and conviction. This deliberate and rapid move is a result of the other time frame participants having made a decision to buy or sell before the open. They are committed to the decision and everyone else simply tries to jump on the bandwagon and join the action.

An open drive to the upside by definition does not register any TPOs below the open price. In the case of an up move, prices will continue



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

to move higher, creating higher highs and higher lows as seen in Figure 5.4. The same holds true for an open drive to the downside; prices will not register any TPOs above the open price. Prices will continue to move lower than the open and the market will create lower highs and lower lows.

It is often difficult to choose the right timing for an open drive trade entry. Sometimes, the market opens with a strong open drive only to see it fizzle and quickly return to trade in the opposite direction of the drive.

Successful Open Drive Characteristics

Although there are many days that often appear to start with an open drive, very few of them actually prove to be successful open drives. Traders should exercise caution in identifying an open drive. The following are some characteristics to help traders identify successful open drives.

- ▶ The market opens and aggressively auctions in one direction.
- ▶ The directional move is fueled by strong other time frame activity in the form of heavy and consistent volume.
- ▶ Price forms an extreme at the open and does not return to test it during the day.

The Open Test Drive

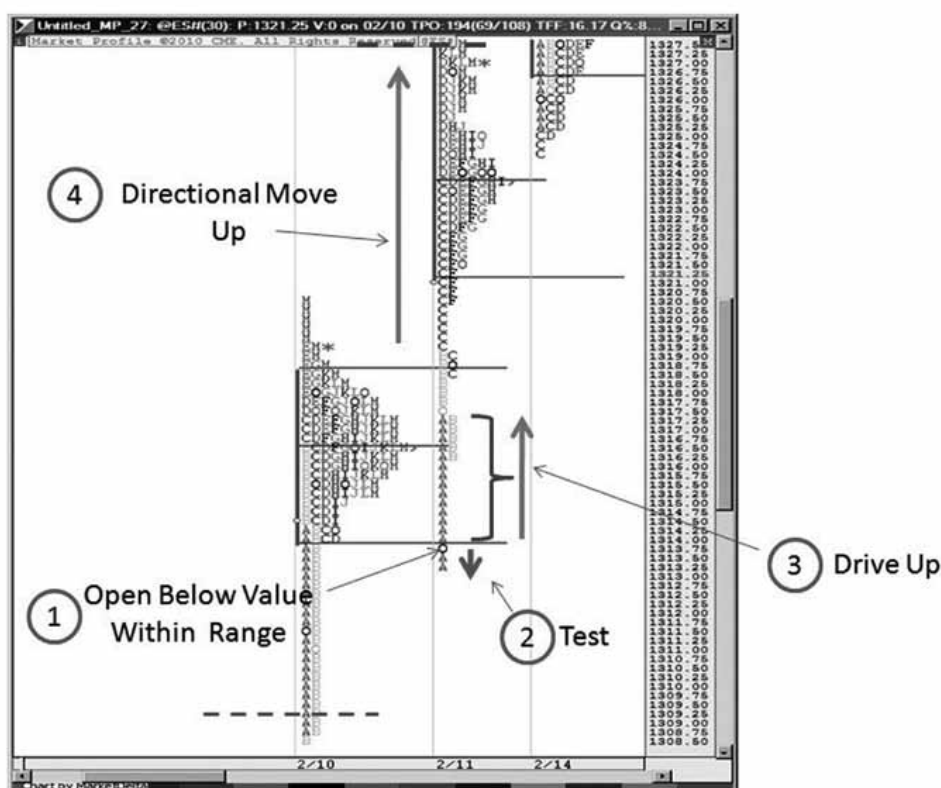
The open test drive is another type of a strong directional open, but with the test drive, the market needs to test and establish a level of support or resistance before it commits to a directional move. Once the support or resistance level is firmly in place, the market begins the move or the directional drive with confidence.

The open test drive will often start near a key reference level from the prior day. The market will quickly visit and test the closest reference level in the opposite direction of the desired move. Consequently, we find that as soon as the market opens, prices trade higher or lower than the open, seeking to test a nearby resistance or support level. This initial move is the test move; if the test holds, the market has the confidence to proceed with a drive into the direction it desires. The open test drive and the open drive both rely on the other time frame activity and volume to fuel the move.

Naturally, the extent of the drive will be determined by the conviction of the other time frame trader for the move. The open drive

Figure 5.5

Open Test Drive Sparks Upside Move



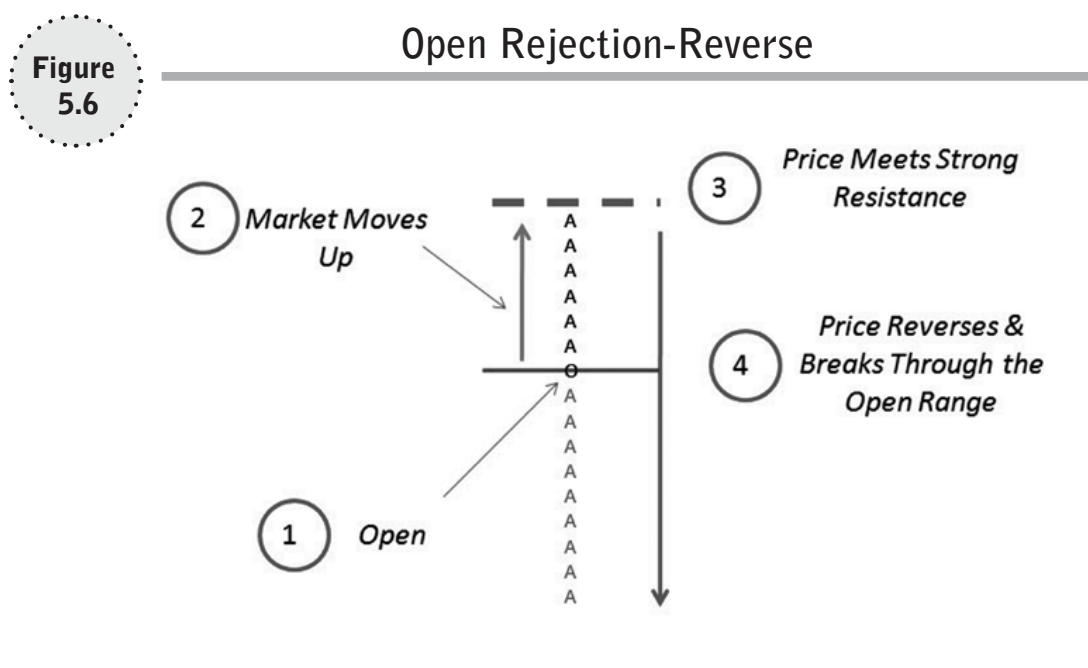
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certainly demonstrates a higher degree of conviction than the open test drive. However, both the open drive and the open test drive are usually followed by directional moves.

In Figure 5.5, the ES mini Profile chart for Friday, February 11, 2011 starts the day with an open test drive. The day opens a tick below the prior day's value area low. Buyers step in at two ticks below the open and price heads higher to the POC. Price stays above the POC, until the following period B. The second trading period opens above the high of period A, and drops lower to find support at the prior day's POC. Once this second higher level of support is established, the market starts to continue higher for the rest of the day. The open test drive sparked a directional move to the upside.

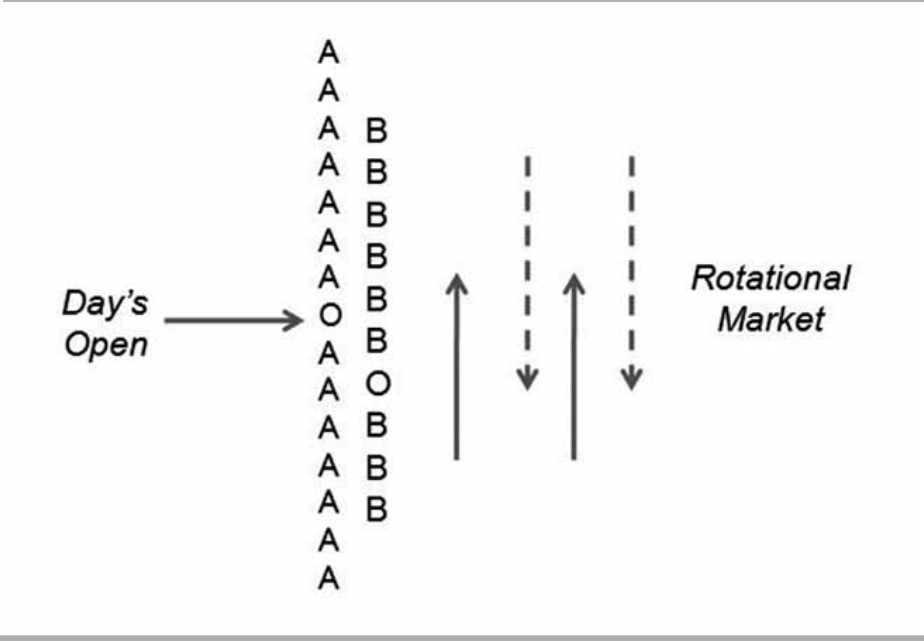
The Open Rejection-Reverse

In the open rejection-reverse, the market opens at a certain price and trades in one direction. Suddenly, the price movement is met with



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Figure 5.7



If the day unfolds as a tight range rotational day, the trader would trade accordingly. If in fact a direction begins to develop in the market, the trader would place their trades in the direction of the move.

Open Auction

The open auction is often indicative of a high degree of uncertainty in the market. The market typically opens and prices move in a narrow range above and below the open as observed in Figure 5.7. There is no apparent directional conviction and the other time frame trader is absent from the market. Sometimes, an open auction can continue for the whole entire day.

In an open auction, the early price development in the market appears to be random. The market randomly auctions above and below the opening range. An open auction clearly indicates an uncertain market condition, where there is no clear directional conviction.

The analysis of the day's open should never be conducted in a vacuum; it should be examined in the context of chart developments as well as news events in the market. This is especially true for an open after a weekend or a period when the market was closed. We live in a world that is rapidly changing and global events frequently have a significant impact on the financial markets.

Chapter Five Quiz

1. The open price for each trading session gives us important information about the initial sentiment for the session.
 - a. True
 - b. False

2. When a new day's open price is still within the value area of the prior day, the market is still in a state of balance.
 - a. True
 - b. False

3. When the new day's open price is outside of the prior day's value, but still inside the prior day's range, we are starting the day in balance.
 - a. True
 - b. False

-
4. If the open is below the prior day's range, it is the sellers that have influenced the markets. If the open price is above the prior day's range, the other time frame buyers are influencing the market.
- a. True
 - b. False
5. An open auction is a characteristic of a strong trending day.
- a. True
 - b. False
6. The open test drive is the strongest and most definitive type of price movement at the open.
- a. True
 - b. False
7. The open test drive will often start near a key reference level from the prior day. The market will quickly visit and test the closest reference level in the opposite direction of the desired move.
- a. True
 - b. False

-
8. An open rejection or reverse creates a high level of uncertainty in the market, making it difficult to take any directional trades.
- a. True
 - b. False
9. The best trading opportunities are often found right at the open, once the type of open is identified.
- a. True
 - b. False
10. Many traders often wait for the initial balance period to be completed before they make any trading decisions.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

6

MARKET PROFILE STRUCTURES

Market Profile charts are visual images of data that are derived from actual market activity. The data is organized and displayed in the form of TPOs. The TPO shapes or forms that emerge are produced as a result of market participant behavior during the displayed trading session. A Profile can be created for the activity of any set time period or market session. Naturally, the longer the period, the more data becomes available, the more visible the structure and the easier it is to analyze the structure.

**Market Profile charts are visual images of data
that are derived from actual market activity.**

Understanding the day's structure enables a trader to objectively organize and observe the market's behavior. Identifying the day's structure is also one of the key elements for profitably trading with Profile charts. There are a number of different types of Profile structures that may emerge in the market.

In learning to analyze the Profile structure, we can begin to see how each structure reflects the various market participant's perceptions, behaviors, and sentiments about the market. Different types of activity in the market will produce different types of shapes and structures for the Profiles.

The Profile shape and structure can reveal whether the market was trending or not, it can identify initiative and responsive behavior in the market, and it can show whether the market was balanced or imbalanced. Moreover, the Profile structure can highlight key reference levels of support and resistance.

In real time, the shape and development of each Profile provides us with valuable information about the emerging organization and structure of each session's activity.

Profile Building Blocks

Market Profile charts make it possible for us to observe the Profile shapes as they are built and created. The orderly arrangement of TPO letters that make up each period on the chart will develop certain patterns and structures that can be quite revealing. The initial day's pattern begins with the first hour of trading or the "initial balance" period.

The initial balance for the day can often be the source of some significant clues about the possible shape and structure of the Profile that is likely to develop for the entire trading day. Learning to interpret and understand the developments that occur during this first hour of the day can be an invaluable asset to intraday traders.

This initial period is represented by the first two thirty minute periods A and B. Together, these two periods will create the initial trading range for the day. A wide initial trading range suggests one of two possible types of Profile structures for the day. One possibility is that the trading day will continue to build on the wide initial range and extend the range in the direction of the initial range, thus indicating a strong directional conviction in the market. The other possibility is that the market has actually developed an adequate trading range for the entire day. In this case, the Profile structure will continue to build within this wide initial range with the possibility of some minor extensions on either side of the range.

Consequently, one of the first things that we look at when we examine the initial balance is the extent and direction of the initial range. If the day starts out with a small or narrow initial range, there is a high probability that the initial range will be extended in one direction or the other during the day. Nevertheless, we should also be aware that there are some occasions when we may find that market activity stays confined within the limited and narrow initial range. This often happens during periods of uncertainty or in anticipation of news events that are likely to influence the market.

As the day's activity continues to develop beyond the initial period, we can see more of the day's structure. In a trending day, the structure will continue to move higher or lower extending the initial range. Once the market finds a fair price, the structure starts to distribute around this price, building a dome around this fair price level. The larger the size of the dome, the greater the acceptance of the price and the more time the market spends around that price in developing the dome. The market is described as being in balance when it is trading around a fair price.

If the market is described as being in balance, then it is trading around a fair price. When the market is moving directionally, it is in a state of imbalance.

At some point in time, once the market participants feel that this fair price level is no longer fair, the market starts a directional move higher or lower. When the market is moving directionally, it is in a state of imbalance. As previously mentioned, the market is continually moving from a state of balance to a state of imbalance. This cycle is occurring in the market at different time frames simultaneously, making it important for traders to always study and analyze the market from a longer time frame perspective, even though they may only choose to trade based on a short time frame.

Learning to understand and interpret Profile structures does take time. However, once a trader is able to understand and identify the structure, they gain a valuable advantage that makes it well worth the effort.

Profile Structures

We will focus our discussions on the six most occurring types of Profile structures. Profile traders need to be able to recognize and identify these structures as they develop. To facilitate matters, we will divide these six basic structures into two categories, as seen in Table 6.1.

The trending structures include the standard trend day structure and the double distribution day structure. Non-trending structures include the normal day structure, the normal variation day structure, the neutral day structure, and the non-trend day structure.

It should not come as surprise that there are more non-trending Profile structures than there are trending Profile structures. Market activity is usually non-trending. A trending market occurs about

TABLE 6.1	
TRENDING STRUCTURES	NON-TRENDING STRUCTURES
Standard Trend Day Structure	Normal Day Structure
Double Distribution Day Structure	Normal Variation Day Structure
	Neutral Day Structure
	Non-Trend Day Structure

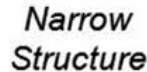
twenty percent of the time. Nevertheless, we will take a closer look at each of these structures and examine their development process.

Standard Trend Day Structure

A standard trend day structure represents the textbook example of a strong directional day in the market; a day when the market has determined its desired direction and pursues it with both confidence and conviction. The distinguishing characteristic of a standard trend day's Profile structure is that it has a long, lean, and narrow structure. It almost looks like a directional arrow was drawn on the chart, as seen in Figure 6.1.

During a standard trend day, there is a high degree of directional confidence throughout the entire day. The market is under the control of the buyers or sellers throughout the entire trading day. We will often find that the market will attract new business over the course of a standard trend day. This new business will add to the volume, creating even higher volume levels that further fuel the move. The higher volume will help push the directional move further and stronger.

Figure 6.1



**Strong
Directional Move**

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For a closer look at this chart visit www.traderslibrary.com/TLEcorner

The standard trend day often starts with a strong directional conviction at the open in the form of an open drive or an open test drive. If the standard trend day opens with an open drive, the long time frame trader control is evident early in the day. The trend begins as soon as the other time frame buyer or seller commits to the directional move. The commitment appears in the form of either aggressive buying or aggressive selling volume.

In the case of a push to the upside, there is a noticeable increase in buying volume. As traders begin to gain a scent of the move, more

and more buying comes into the market. Aggressive buyers quickly start to buy at the ask. The increased demand quickly moves prices higher and higher; each period starts to form a higher high and a higher low, creating the sequence that builds the characteristic narrow shape for the day.

The open for each new period is usually in the top range of the prior period. The value area for the day expands and grows in the direction of the trend. As the market continues to move higher, it is searching for a fair price level. More and more traders step in to buy at higher prices as the value area parameters continue to rise in the direction of the move and the POC for the day continues to move higher and higher.

The market may pause for a short period at a certain price level, only to continue higher a short while later. In the standard trend day, there are typically no more than three or four consecutive TPOs at any given price level. In fact, as the number of TPOs starts to build up at a certain price level, this indicates that the directional move is weakening. If there are five or more TPOs that appear consecutively at the same price level, a prudent trader should realize that the market has reached the top of the move. The market is signaling to us that a fair price has been found and has now begun to distribute around it. There is usually some profit-taking at this level. This does not mean the long-term trend is over or that a reversal is coming. It merely suggests that the directional move has found a fair price for the current session. It may be time for some profit-taking at this point in time for those traders who participated in the directional move.

If five or more TPOs appear consecutively at the same price level, the market is signaling that a fair price has been found.

Standard trend days offer traders some of the most profitable trading opportunities. It is important for a trader to learn to quickly identify trend days, so that they can participate in the move in its early stages.

The market will frequently consolidate or pull back at certain price levels before it resumes in the direction of the trend. These consolidations and pullbacks provide traders with opportunities to participate and trade in the direction of the trend. Unfortunately, standard trend days do not frequently occur in the market. However, when they do occur, they provide a great opportunity for the most lucrative of trades, especially if a trader is able to identify them in the early stages of their development.

A prudent trader should always position themselves on the same side of the market as the other time frame participant who is in control. Most importantly, a trader never wants to be caught on the wrong side of the market on a trending day. Any position that is in the opposite direction of a strong move is both a consistent and massive loser.

Double Distribution Trend Day

The other type of trend day structure is known as the double distribution day. The double distribution trend day lacks the conviction and commitment of the larger time frame trader that is evident in the standard trend day Profile structure. The long time frame trader does not begin to assert their control early in the day. As a matter of fact, the early period during a double distribution trend day is usually rather deceptively uneventful. The session usually starts with a small initial balance range, without a dominant buyer or seller. The market continues to distribute in this early range, creating a distribution dome.

At some point during the day, the long time frame buyer or seller asserts their control and quickly moves the market directionally. The move seems to come when it is least expected and the directional move usually happens quickly. By the time many traders decide to enter the move, the market is creating a new distribution above or below the earlier distribution dome that occurred during the day.

The two distribution domes that form on the double distribution structure are often separated by a single print column. This single print area on the Profile structure is described as a minus development. This area of minus development becomes an area of support as prices rise, or resistance if prices are moving lower. The double distribution trend day does not have the same level of conviction as a standard trend day and usually does not extend the range to the same extent that a standard trend day does. In Figure 6.2, we have a chart displaying two different consecutive examples of double distribution Profile structures for the ES mini U.S. sessions on December 15th and 16th of 2010.

On December 15th, the market opened at 1234.50 and moved higher during the “A” and “B” periods. However, the initial balance trading range was rather narrow, and the market continued to distribute around a price level of 1237 for most of the morning.

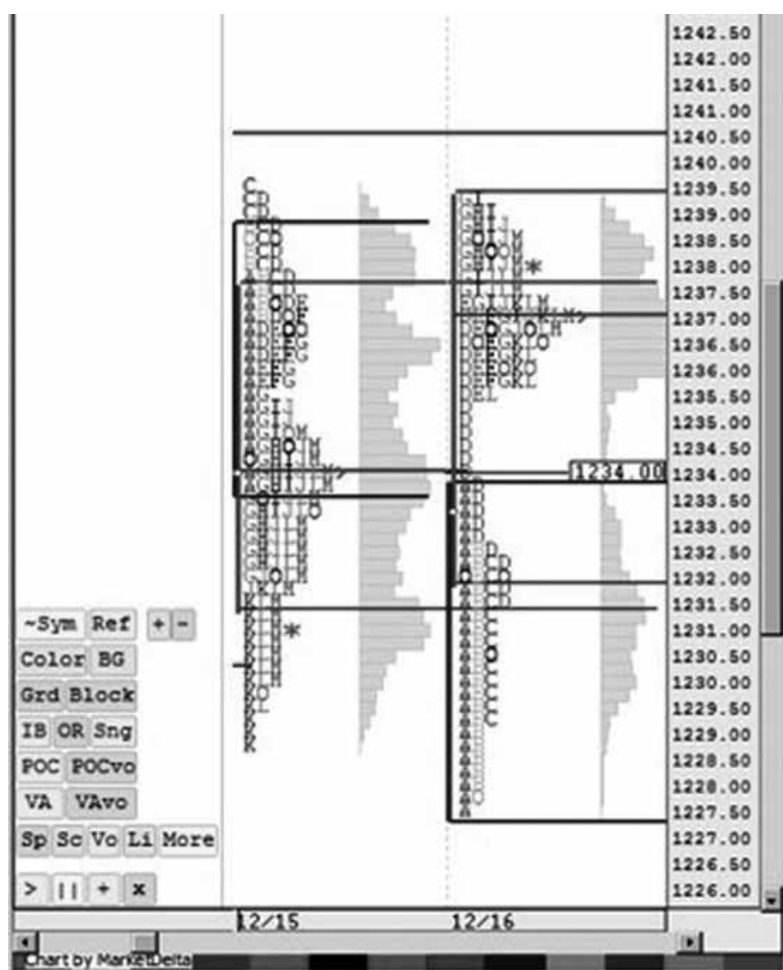
Suddenly, in period “G,” the market drops lower, extending the initial balance range. The market continues to create lower distribution around a price level of approximately 1234. In the second lower distribution during the day, the market continued to drop lower and extended the day’s range to new lows. However, during periods “K,” “L,” and “M,” we observe that prices returned to the new fair price level of 1234.

This observation should keep us alert to the fact that the market sentiment was not as bearish as the dropping prices may have suggested. The lows of periods “L” and “M” were all higher lows and each period had a higher high, indicating the presence of responsive buyers at these low levels.

On the following day, the market opens at 1232 and prices drop lower. They actually fall below the prior day’s low during the initial period. The trading range for the first period “A” of December 16 is a healthy seven-point range.

Figure
6.2

Double Distribution Profile Structures



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Once again, the astute trader will note that this is deceptively bearish. Based on the observations from the prior day, we knew that there were buyers at these low levels. Furthermore, period “B” never managed to extend the range of period “A,” once again confirming the presence of buyers. In some circles, this is often described as a bear trap. The bulls lure many traders into selling short and they use their short covering to further propel a bullish move upwards. The market then briefly distributes around a price level of 1231.50

during the morning session and then shoots upwards during period “D,” extending the initial range higher. As it becomes apparent that what originally appeared as a bearish day is now moving higher, many traders who were holding short positions start to cover and the market edges even higher. This activity starts to create a second distribution dome around the price of 1237.

The double distribution day can be a tricky day for many traders. However, if we keep a close eye on the structure as it develops and analyze it in the context of the larger time frame, we can often avoid many of the traps in a double distribution day.

Non-Trending Profile Structures

A non-trending structure is one where the market participants are uncertain about the direction of the market. The market activity has no clear directional conviction of any kind. A non-trending structure is a structure that is limited in range and one where the market is not facilitating movement in any particular direction. The non-trending structure is also characterized by low volume trading levels.

Non-Trend Day Structure

A non-trend day is exactly as the name suggests, it is a day without any kind of a visible directional trend. There is no significant movement higher or lower in the market. The market seems content to move within a limited range around a fair price. This often occurs in the market before the release of major economic numbers, news events, or holidays. Market participants will often balance their positions during a non-trending market in anticipation of a market move.

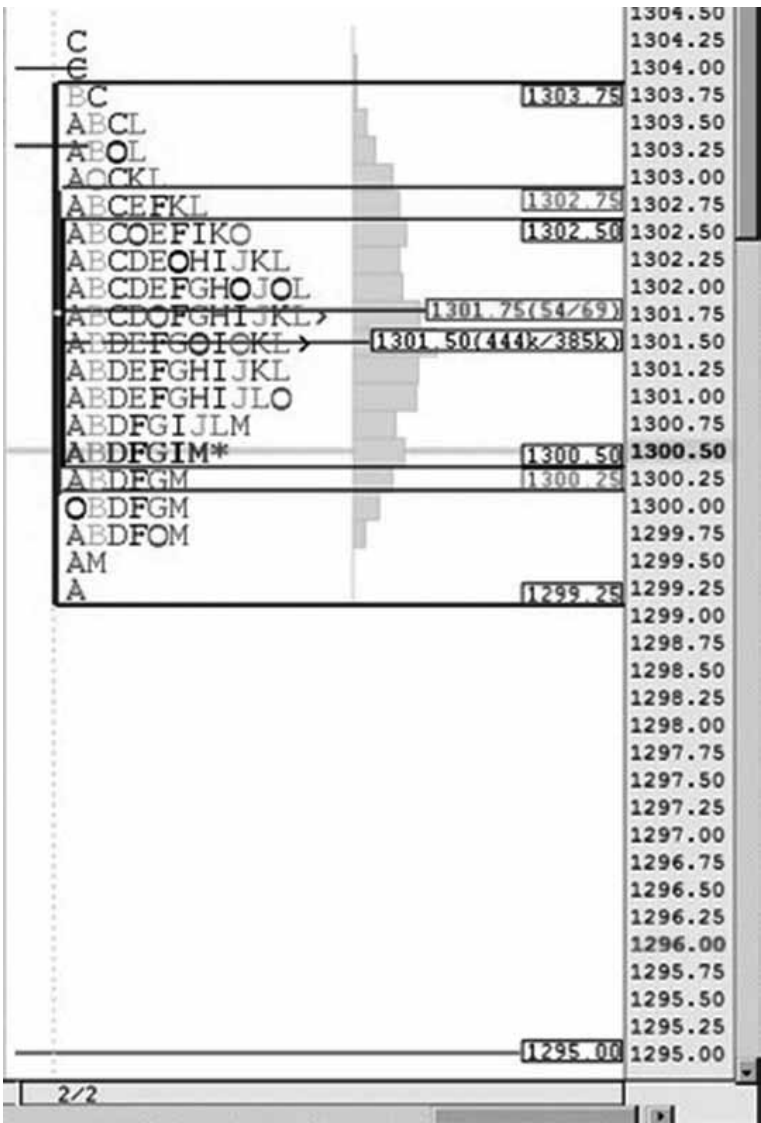
The open for a non-trend day often starts out looking like it may be an actual trend day. It frequently opens with an open drive or

an open test drive. However, the activity that will follow does not expand very far beyond the initial range.

The market just continues to distribute within the limited range, resulting in a rather large dome within the range as seen in Figure

Figure
6.3

Non-Trend Day Structure



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6.3. On February 2, 2011, the U.S. session for the ES mini opened at the 1300 level. The initial balance period of A and B moved the price up to 1303.75. As the day continued to develop, each period that followed continued to stay within the initial range.

Moreover, the columns for the periods that followed also started to decrease in range as the market continued to further narrow its trading range. The market simply rotated back and forth around the fair price of approx 1301.50. On a non-trend day Profile structure, we observe that the volume POC and the price POC levels are about the same and we see a relatively large number of TPOs accumulate at the POC, anywhere from 10 to 12 TPOs.

Non-trending days offer limited profit targets for intraday traders. Typically, intraday traders will buy at the session value lows and sell at the session highs. It is important to note that an apparent non-trend day can also suddenly change to a double distribution structure. Consequently, a trader cannot conclusively determine a non-trend day until the session concludes.

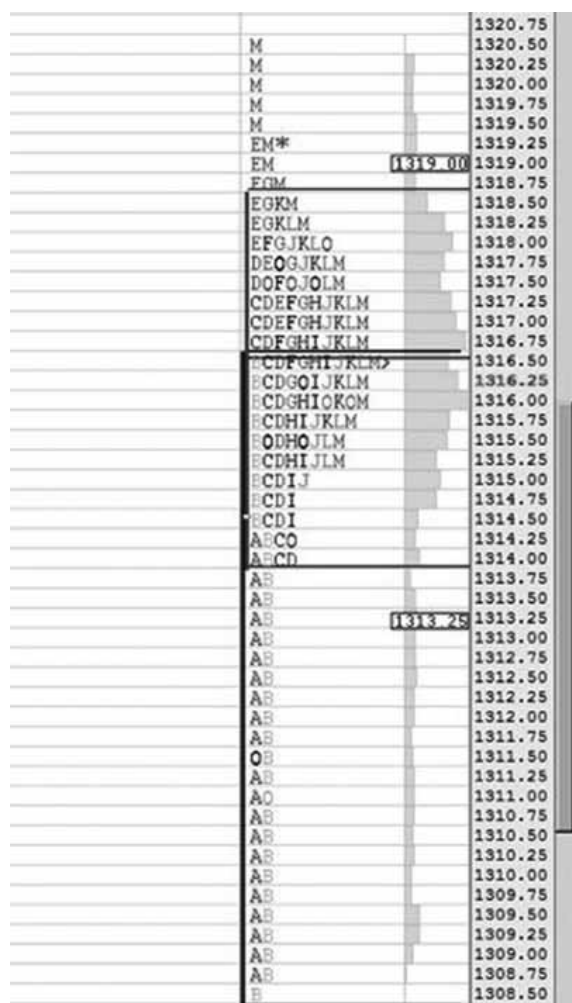
Even though non-trend days do not offer the most lucrative of trading profit targets, nevertheless, they are important for us to recognize and identify because they will frequently be followed by a directional market move.

Normal Day Structure

The normal day structure often develops on trading days that have early news announcements. The news causes a strong initial directional move in the market, thus creating one of the hallmark features or characteristics of a normal day—the wide initial balance, as seen in Figure 6.4. The range of activity for the initial balance, or periods A and B on the chart extends from the 1308 price level all the way up to the 1316 price level. This wide initial balance is created by an aggressive entry into the market by the long-term participants.

**Figure
6.4**

Wide Initial Balance



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This aggressive entry moves the market to a new fair price level. The power of the early move misled many traders into thinking that a trend day may be developing. However, as the day progresses it becomes apparent that the initial move is not sustainable. The market creates a new distribution around a new price level.

I am not sure how or why this Profile structural pattern acquired the description of a “normal” day structure. It does not occur on a

frequent or normal basis in the market; perhaps it is because it highlights the normal path of the market from imbalance to balance. The wide initial balance is caused by an imbalance in the morning that leads to a state of balance in the afternoon.

These normal structures are often described as the capital letter “P” shape or the small letter “b” shape Profile. The shape depends on where the distribution occurs in the range. I simply think of them as a Profile distribution above or below a pole. After a strong directional move down, a distribution often begins to build on the pole, creating the “P” shape as a result of short covering.

Normal Variation Day

On a normal variation day’s Profile structure, there is a combination of balance and imbalance observed during the day’s activity. The day is still characterized by a wide initial range, even though it is usually somewhat smaller than the initial range for a standard normal day, as illustrated in Figure 6.5.

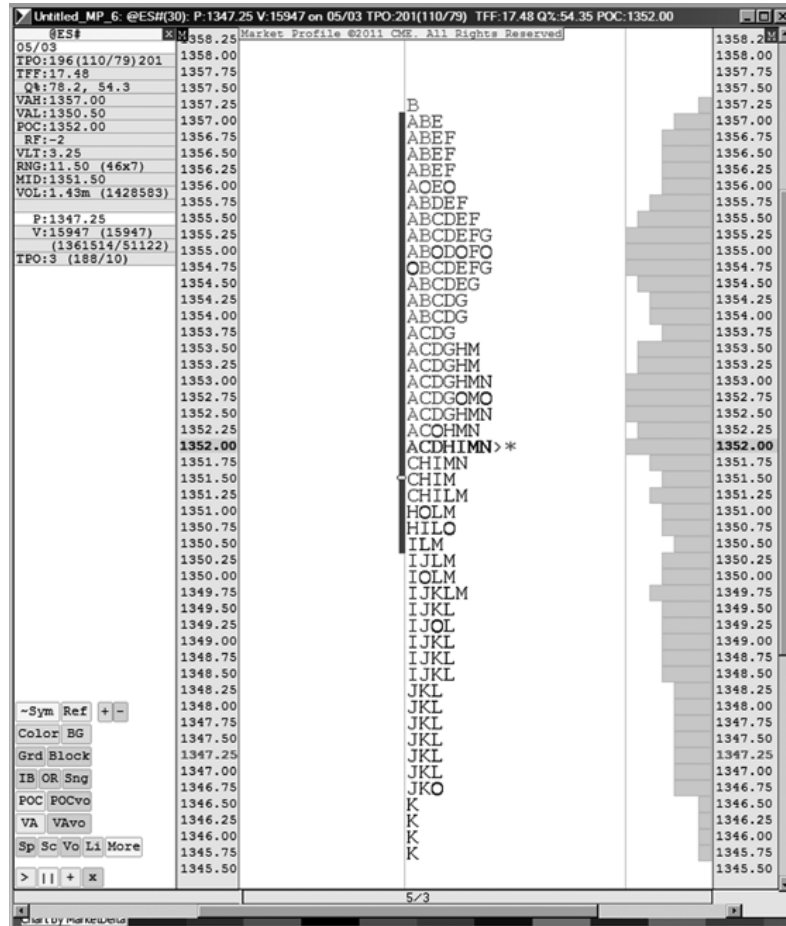
In Figure 6.5, on May 3 of 2011, the U.S. day session for the ES mini opens at 1354.75. The market has an initial range of approximately five points. The market maintains a state of balance during the initial range for periods C, D, E, F, and G.

The market then extends the range lower in period H and I, creating an imbalance. The market continues to trade lower for periods J and K. However, the market returns to back to balance during periods L, M, and N.

In the case of a normal variation structure, the market activity does not form the characteristic standard “P” or “b” shape, but it still displays a combination of balance and imbalance in the daily Profile structure.

**Figure
6.5**

Normal Variation Structure



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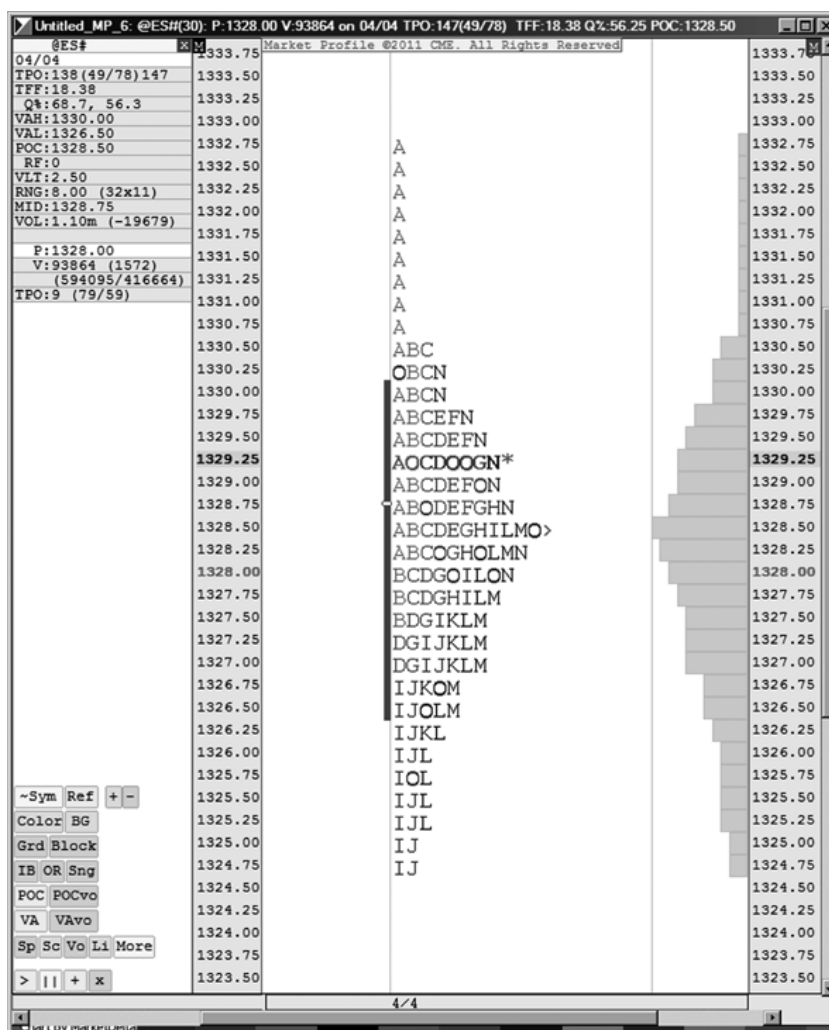
Neutral Day Profile Structure

The neutral day Profile structure is another type of the non-trending Profile structures. The activity for a neutral day is the result of an agreement in the perception of value by both the long-term buyers and sellers. This agreement or alignment in value perceptions does not happen frequently, but it does happen.

The long-term buyers and sellers usually have varying perceptions about value in the market. On some occasions, their perceptions of

Typically, on a neutral day the market opens and extends the range to an approximately equal level above and below the open as seen

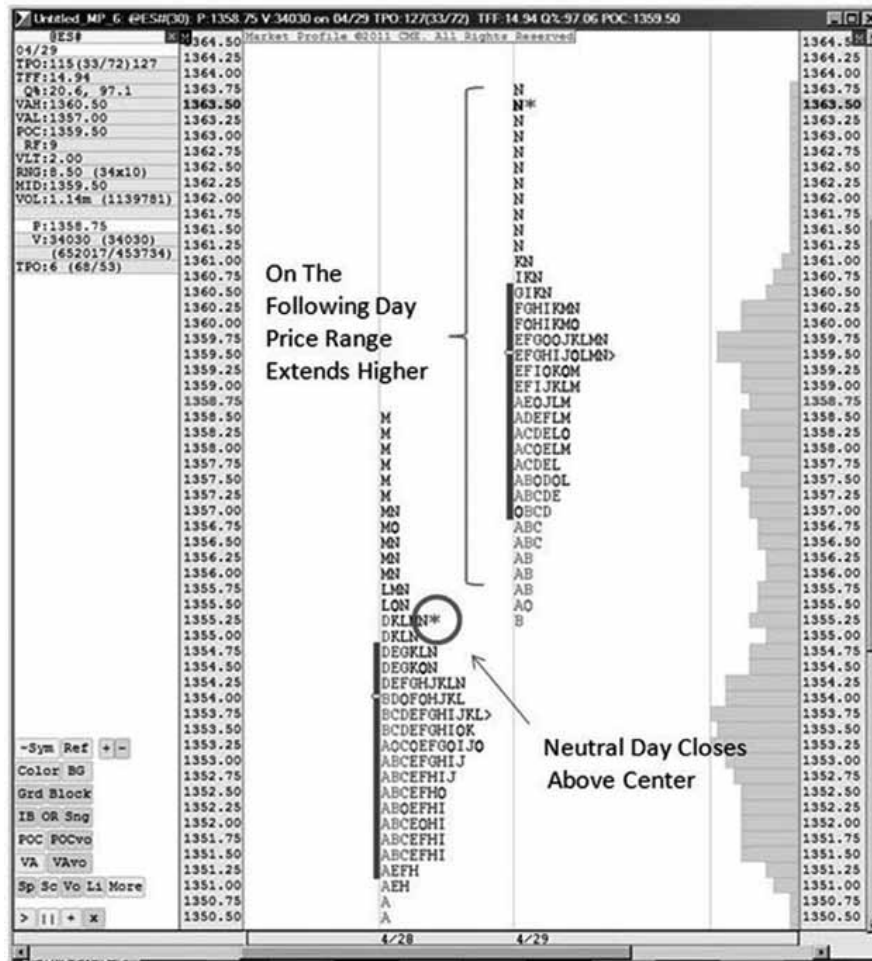
Neutral Profile Structure



Market Profile Structures

Figure 6.7

Sellers Gaining Dominance



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in Figure 6.6. The market opened at 1330.25 and printed ten TPOs above the open and eight TPOs below the open price in period “A”. Once the initial balance is completed with the close of period “B”, we find that the range above and below the open is almost identical in value. There are ten TPOs above the open and eleven TPOs below the open. The market continues to trade on the lower end of the initial range, extending the range lower but always returning to value. The neutral day eventually develops a wide point of control with eleven TPOs—a characteristic hallmark of non-trending days.

Traders frequently focus on the settlement period and the close of the neutral day, as it may yield potential clues about future market activity. Consequently, traders divide neutral days into two basic categories based on where they close. There are “neutral center” and “neutral extreme” days. On a neutral center day, the market closes at or close to the center of the day’s range. As we observe in Figure 6.6, the day’s session closes at 1329.25, about three ticks above the center. This tells us that the perceptions of value between both the long-term sellers and buyers are still relatively close.

However, if we observe a close towards the extreme high or low of the day, this signals that these perceptions may in fact be changing. If the neutral day closes above the center and towards the high of the day’s range as seen in Figure 6.7, it suggests that the buyers are becoming more aggressive. On the other hand, if the close for the neutral day is at the other extreme towards the low of the range for the day, it would suggest that sellers are becoming more dominant in the market.

Understanding the various structures helps us to both analyze the market activity as it occurs as well as gain a deeper understanding of market participant behavior and activity after the market closes.

Chapter Six Quiz

1. The Profile shape and structure can reveal whether the market is trending or not, identify initiative and responsive behavior in the market, and also show whether or not the market is balanced or imbalanced.
 - a. True
 - b. False

2. The initial period is the first hour of activity prior to the open of the day's session.
 - a. True
 - b. False

3. Once the market finds a fair price, the structure starts to distribute around this price, building a dome around this fair price level.
 - a. True
 - b. False

4. A normal day Profile structure develops when the market has determined its desired direction and pursues it with both confidence and conviction.
 - a. True
 - b. False

-
5. On a trending day, the open for each new trading period is usually in the top range of the prior period. The value area for the day also expands and grows in the direction of the trend.
- a. True
 - b. False
6. The double distribution trend day immediately displays the same type of conviction and commitment of the larger time frame trader that is evident in the standard trend day Profile structure.
- a. True
 - b. False
7. The open for a non-trend day often starts out looking just like it may be a strong trend day.
- a. True
 - b. False
8. On a normal variation day's Profile structure, there is a combination of balance and imbalance observed during the day's activity.
- a. True
 - b. False

-
9. The long-term buyers and sellers usually have the same perceptions about value in the market.
- a. True
 - b. False
10. Traders frequently focus on the settlement period and the close of the neutral day, as it may yield potential clues about future market activity.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

7

SPLIT AND MERGED PROFILES

Traders often look to the shape and structure of the daily Profile to provide them with some clues about potential direction of the market. While the Profile shape and structure are not meant to predict market behavior, nevertheless, they can and do provide us with many valuable insights about the condition of the market and possible future direction.

To gain a clear understanding of the condition of the market, it is helpful to look at the market in a number of different ways and to conduct a variety of different analyses. We cannot rely solely on the day's Profile structure. We will need to look beyond the actual shape of the day's Profile.

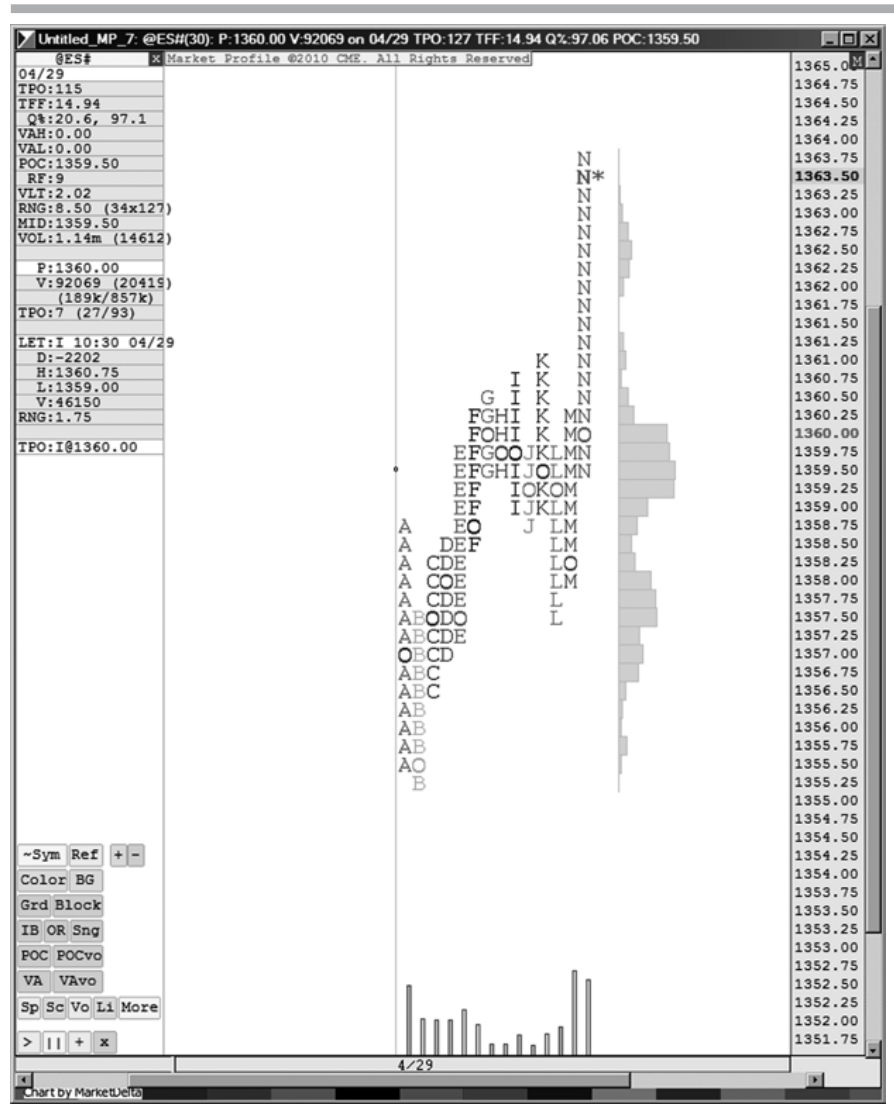
We will need to split the Profile and to look at the components that make up each daily Profile. Moreover, we need to look at the day's Profile in the context of the overall market structure.

Split Profiles

In order to closely examine the day's activity, it is useful to split the Profile into a format that displays the various periods that make up the session's Profile. Splitting a Profile simply involves breaking up the Profile structure into separate and distinct periods. Most

Figure 7.1

Split Profile



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Profile software platforms offer users the ability to automatically split Profiles for analysis. By splitting the Profile, we are able to better examine the flow and range development for each period during the trading day.

**Splitting the Profile structure into
separate and distinct periods allows us to
closely examine the day's activity.**

Once a Profile is split, we will have a number of separate and parallel letter columns that appear on the chart, as seen in Figure 7.1. In this chart, we have a split Profile for the ES mini futures trading that occurred during the U.S. market session. The split Profile for the U.S. trading session has 14 columns. The columns start the trading day with the letter “A” and conclude the U.S. trading session with the letter “N.” Each letter column on the chart represents a thirty-minute period of trading activity. The split chart formation closely resembles that of a traditional bar chart. On the split Profile chart, each bar or column is a distinct range of trading activity for a thirty-minute period.

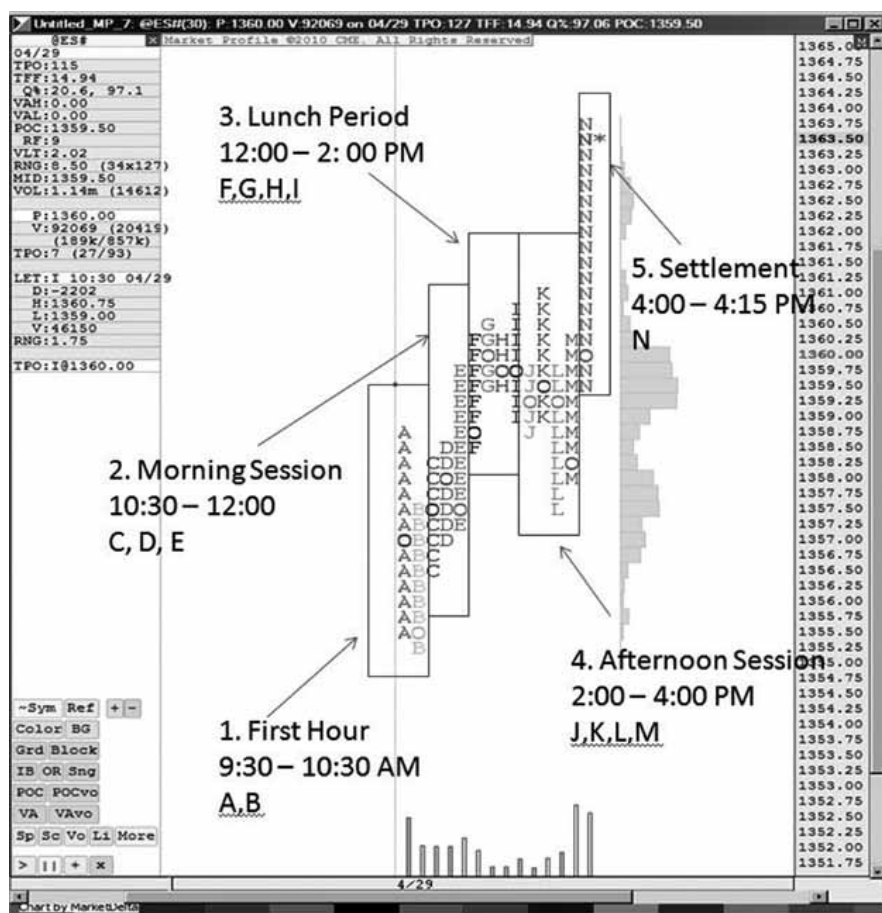
Daily Segments for the ES Mini U.S. Session

Market activity is function of human decisions, actions, and behavior. Even though automated systems and algorithms are now an integral part of the market, all of these systems are ultimately designed and controlled by humans. In analyzing the split Profile for the ES mini, it is helpful for us to break up the U.S. session into five parts or segments, as shown in Figure 7.2.

It is important to note that the number of sessions or segments for the day will vary significantly from one instrument to the next and

**Figure
7.2**

ES Mini with U.S. Market Activity Segments



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from one market to the other. Different instruments and different markets have varying schedules and different daily trading patterns.

In the case of the ES mini chart in Figure 7.2, the segments were determined based on the daily routine of professional traders on the floor of the Chicago Exchange. Even though the ES mini futures market is a 24-hour market, the most active trading periods for that instrument are during the U.S. market hours, which start at 9:30 a.m. EST and conclude at 4:15 p.m. EST.

Consequently, the five sessions on the ES mini chart are only specific to the ES mini. However, the same principles used to divide the day

can be used for other markets. An analysis of the daily trading patterns for an instrument is always essential prior to segmenting any Profile. On the ES mini chart, each segment on the chart corresponds to one of the day's key trading periods.

The five segments shown in Figure 7.2 include:

1. The Open Session (9:30 a.m. – 10:30 a.m. EST)
2. The Morning Session (10:30 a.m. – Noon EST)
3. The Lunch Session (Noon – 2:00 p.m. EST)
4. The Afternoon Session (2:00 p.m. – 4:00 p.m. EST)
5. The Closing Session/Settlement (4:00 p.m. – 4:15 p.m. EST)

As previously mentioned, market activity is a function of the human participants in the market. Consequently, market activity is strongly influenced by the daily work routine of professional traders. The level of daily market activity and trading volume tend to move in tandem with the daily habits of the traders on the floor. At the opening bell, the day typically starts with a frantic and vigorous level of activity. As the volatility that accompanies the market's open gradually drops, the open session continues for the first hour of trading. During this first period of the day, traders are trying to develop a feel for the day's direction and gauge potential upcoming activity.

The level of daily market activity and trading volume move in tandem with the daily habits of the traders on the floor.

The outcome of the first hour has a strong influence on the trading activity that follows during the morning session. If the traders have identified a directional bias for the day, they are either long or short in the morning. If in fact there is no clear direction for the market,

trading tends to be confined to a narrow trading range throughout the morning. As the morning session winds down, traders are ready for a break.

Many floor traders often leave their posts to go to lunch and use the opportunity to socialize with other traders. As a result, once lunchtime arrives, market activity dwindles significantly. For many years, it was rare for any kind of a significant move to occur during the lunch period. The only time any major activity occurred during lunch was a result of major news driven events. The lunch hour came to be known as a period of rest in the market, a mundane or slow trading period during the day. Historically, there was always a noticeable drop in trading activity volume during the lunch period. However, in recent years, there has been a change in this pattern and it is not as reliable as it once was in the past. As a result of algorithmic trading and an attempt by institutional traders to be less predictable, sometimes—although not often—we do observe that major market moves will begin when they are least expected during the lunch session. The split period view and segmentation of the market actually makes it easier for us to spot this activity when it occurs during lunch.

The lunch session is followed by the afternoon session. After lunch, traders return to resume their trading activities. The afternoon period is often full of surprises; it is not unusual to find the market completely switching direction and erasing all gains that were made during the first part of the day.

The afternoon session may also simply be a continuation session, where the market is content to resume the same activity and direction for the morning. There are also times when the afternoon session stays in a sideways pattern, waiting for news or simply uncertain about direction. Once the afternoon session is about to conclude, we enter into the settlement period. The settlement period is a critical period for the day. It is a forcing point for all daytraders; it is the last opportunity of liquidity prior to the next trading day. Daytraders

must settle their positions during that period and other longer time frame traders must also decide whether they will continue to hold their long or short positions into the next day.

As a result, the settlement period is often a rather volatile and tumultuous period. Daytraders with open positions who must be flat prior to the end of the day are forced to make their final transactions for the day. A daytrader with a short inventory will have to cover their position during this period before the market closes and liquidity dries up. Long positions will also need to be sold to be settled at the end of the day. The settlement period is an especially critical decision-making period for any daytraders that are carrying a large inventory at the end of the day. Trading volume tends to increase and accelerate during the last ten minutes of this period. Ultimately, the settlement period determines our closing price for the day.

In Figure 7.2, we have an example featuring the ES mini opening at 1357. The open session or the first hour had a modest range, even though period B dropped for only one single tick lower than period A and closes above the open of period A, giving us a slight bullish bias for that first hour. Period C opens the morning session at the high of the open session. It does not extend the A period range, but it offers us a higher high and a higher low over period B, thus reinforcing the bullish bias that was detected earlier at the close of the open session. The morning session continues to make higher highs and higher lows in periods D and E. The morning session also manages to extend the initial trading range of the first hour with five ticks to the upside.

F is the first letter for the lunch period. The F column continues the bullish momentum observed in the morning session and creates a new high for the day. As the F period ends, the trading range during lunch starts to narrow significantly in periods G and H. As we approach the afternoon session, the last period in the lunch session, period I, expands the trading range and once again creates a new high for the day during the lunch period. However, it is important to note that it also creates a lower low than period H. This indicates an increase in volatility and a potential change in direction.

As the afternoon session begins, the bullish sentiment seems to have vanished. The market starts to drop lower in period J, only to return back up to create a new high for the day in period K. The afternoon volatility continues as prices move lower in period L. Period L finds support at two ticks above the day's open and is followed by period M which takes us back up towards the day's highs.

The market continues to trade higher during the settlement period N and closes one tick below the day's high.

Overnight Session

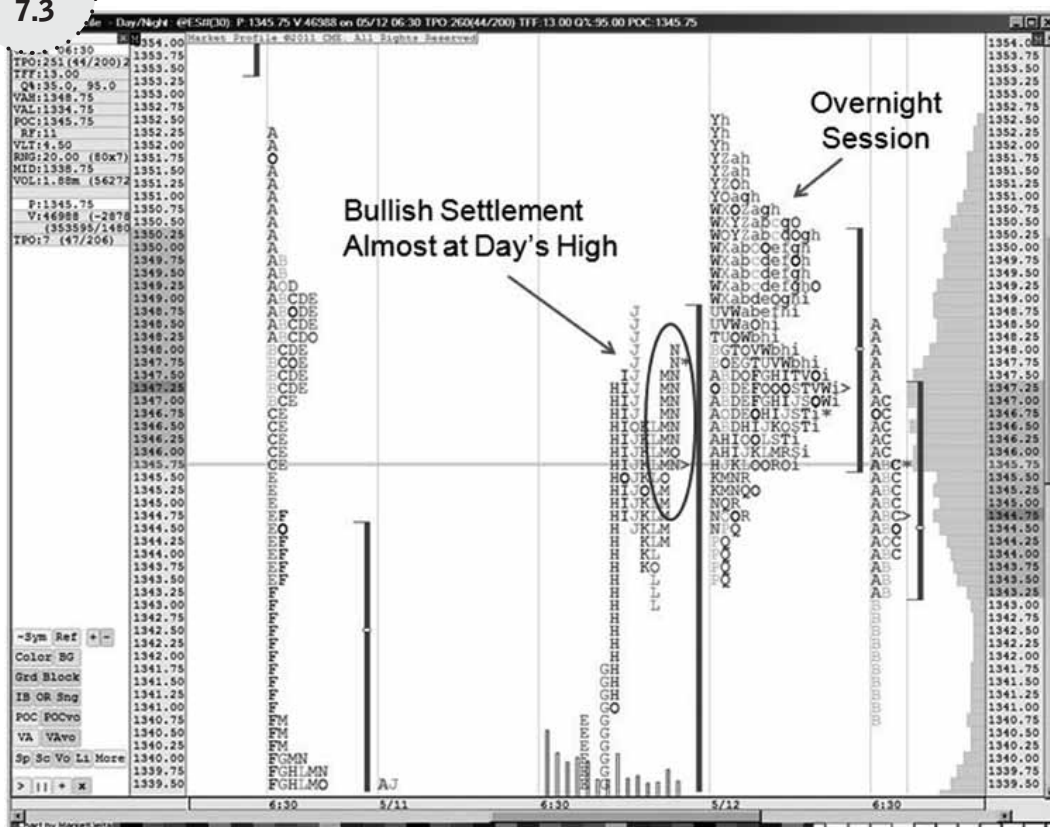
Even though the U.S. markets close and daytraders settle their positions at the end of the trading day, the significance of the settlement period extends beyond the day's activity. The close of the U.S. trading day and the settlement period become the start of the overnight session. The financial markets are global in nature and capital flow in the market has a 24-hour cycle. Traders cannot limit their view to the U.S. day session; they must take into account the trading activity that takes place during the overnight market. The U.S settlement period becomes the starting benchmark for the overnight session. It is important to analyze how the overnight market reacts to the settlement period.

Even though the U.S. markets close at the end of the trading day, traders must still be aware of what occurs during the overnight session.

For example, if the market settled on a bullish note as seen in Figure 7.3, we need to monitor activity in the overnight session to determine whether or not this bullish sentiment will continue. In a strong bullish trend, the overnight session will continue the uptrend, making new highs. Overnight traders may also decide to sell into the strength of the U.S. session. In analyzing the overnight session, we

In Figure 7.3, the settlement period opened at 1346 and closed at 1347.75. This was close to the high of the day. However, we find that the overnight session opened below the close of the settlement period and continues lower. Nevertheless, the A period never dropped below the open of the settlement period. The overnight session continued to trade within the range of the settlement period for some time. It then dropped and found support at the low of the afternoon session. The

Rotational Factor Value Assignment



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market then continued to move higher, creating a double distribution for the overnight session. Eventually, by morning, prior to the open of the U.S. session during period I, the market returned to the high of the prior day's settlement range.

The overnight session brought us right back to our starting point. This indicates a weakness or a lack of conviction in the prior day's bullish trend. If the overnight had concluded the session well above the settlement range, we would have a gap at the open. If the market did not fill the gap and continued higher, this would be a strong indication of buyer conviction. If the market drops to fill the gap, that is a sign of a weaker market.

**If the market drops to fill the gap,
that is a sign of a weaker market.**

In our example in Figure 7.3, we were able to observe the weakness at the open of the new day, as the A period was only able to move two ticks above the settlement period high. The market then continued to move lower on period B. Weakness does not necessarily mean a reversal will occur; it simply means that the current directional move is losing some steam. The market may consolidate for a period of time, regain its strength and continue higher or the market may consolidate, continue to weaken, and eventually sell off.

The importance of the settlement period was evident in our analysis of the overnight market as it once again regained its relevance at the open on the following day. The split Profile helps us to clearly see the settlement range and identify strength or weakness.

Split Profile Rotational Analysis

Rotational analysis is another useful technique that can be used with a split Profile to gauge the directional bias in the market. Once we split the Profile, it becomes easy for us to compare the trading range

highs and lows from one period to the next. In addition to a simple visual comparison, we can assign values to the flow that we observe and calculate what is known as a “Rotational Factor.”

The rotational factor is a simple numeric summation of an assigned value for the consecutive levels of highs and lows for the various periods on the split Profile. To assign the appropriate values to the highs and lows of each range, there are a few simple rules that must be followed. The value assignment rules are as follows:

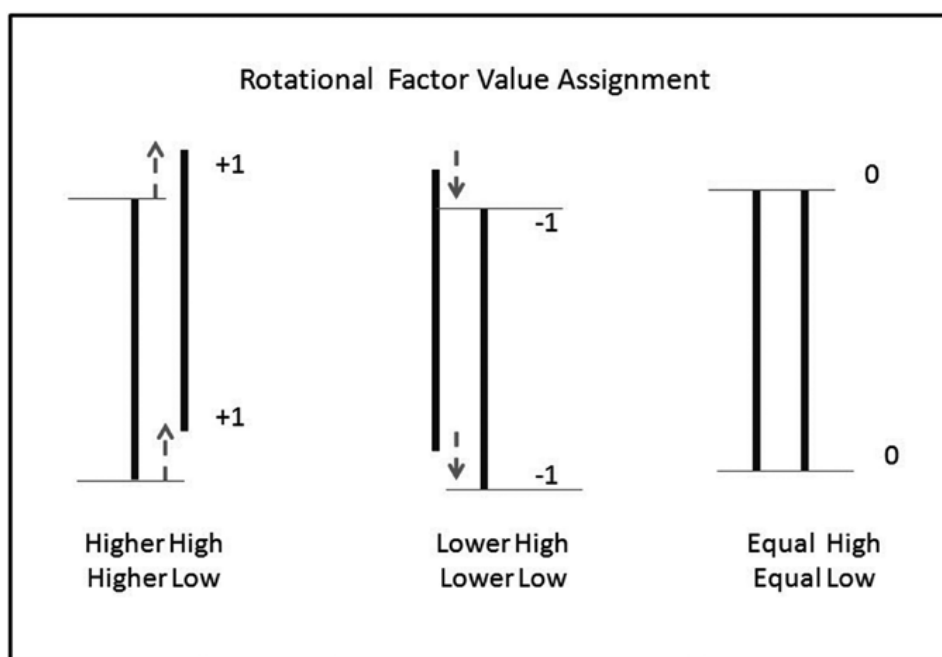
1. If the high of a period is higher than the prior period's high, it is assigned a value of +1.
2. If the low of a period is higher than the prior period's low, it is assigned a value of +1.
3. If the high of a period is lower than the prior period's high, it is assigned a value of -1.
4. If the low of a period is lower than the prior period's low, it is assigned a value of -1.
5. If either the high or the low are at the same level as the prior period, they are both assigned a value of zero.

These rules are illustrated in Figure 7.4.

To illustrate this simple process, we will assign the appropriate values for each period on the split ES mini chart in Figure 7.5. Once the values are assigned in accordance with the rules, we calculate the rotational factor sum for all of the values at the highs and lows.

**Figure
7.4**

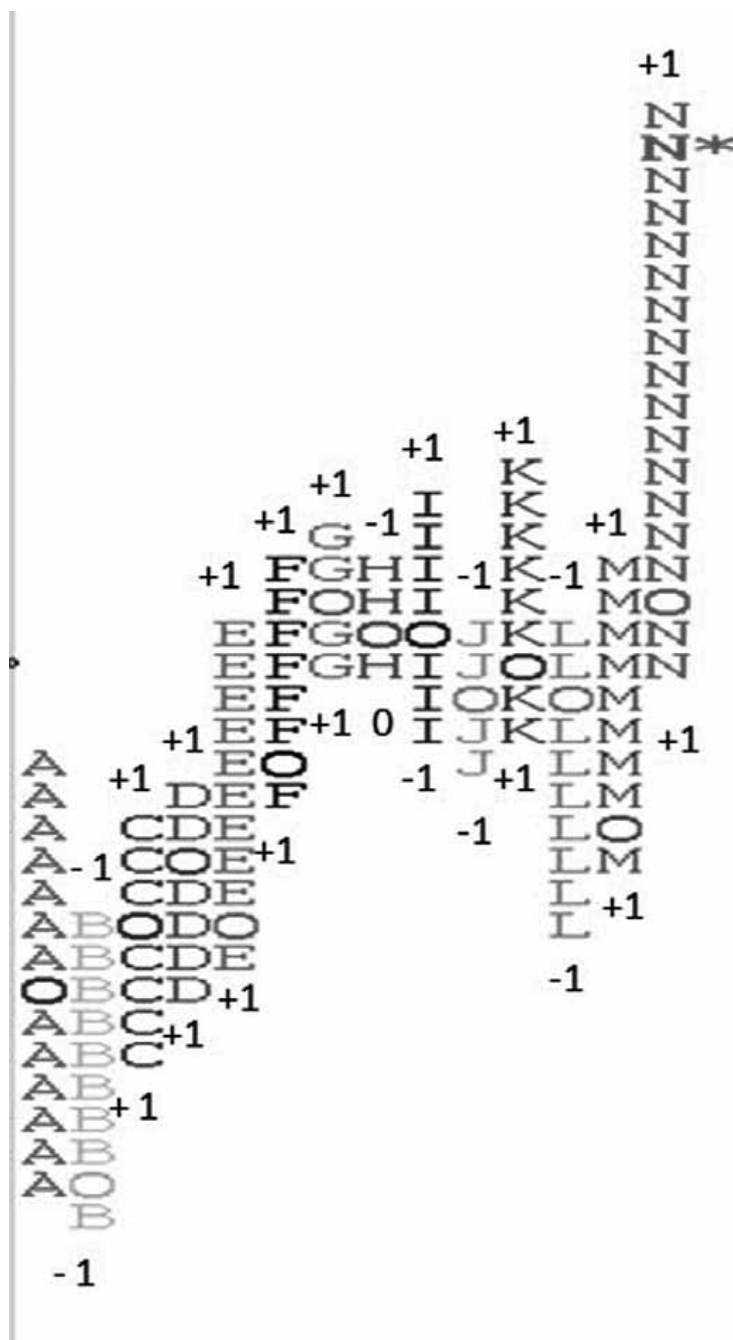
Rotational Factor Value Assignment



For a closer look at this chart visit www.traderslibrary.com/TLEcorner

**Figure
7.5**

Calculating the Rotational Factor Sum on Split ES Mini Chart



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The total sum of the values will yield one of three possibilities: the sum may simply be a zero, a negative value, or a positive value.

A sum of zero indicates an uncertain or non-directional market. In other words, the activity is range bound without a strong directional bias. If our calculation provides a positive value, the period rotations are indicating a bullish bias. The greater the value, the stronger the bias. On the other hand, if the analysis yields a negative value, this indicates an apparent bearish bias for the periods that we have examined.

This simple technique is just another basic tool in our analytical toolbox. It is important to understand that this technique has no predictive value; nevertheless, it helps us to gain a better understanding about where market sentiment is over a number of trading periods.

In our example, in Figure 7.5 the rotational factor sum for the entire day was nine—a positive number and a relatively high number for the day. Thus, the rotational factor value indicates that the day's activity was definitely predominately bullish for the day. Traders should not rely on this calculation alone for any trading decisions. They should use it along with other analytical techniques to establish market bias and sentiment.

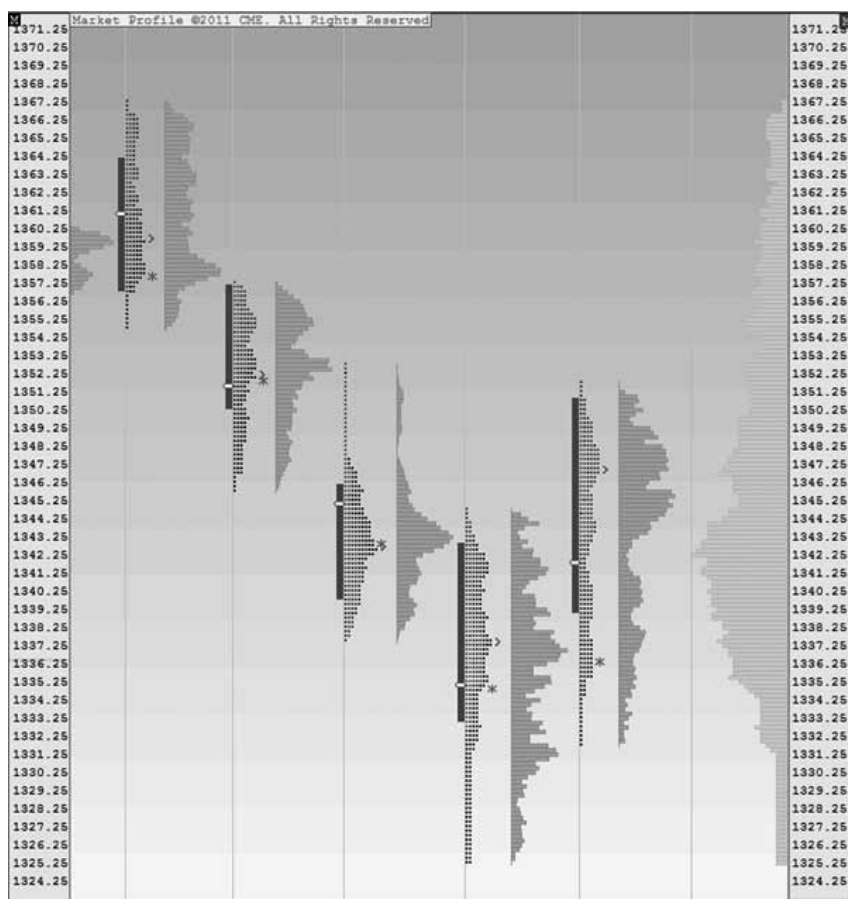
Composite Profiles

Every Profile that we look at is a part of a larger Profile, just as each trading day is part of the trading week and each week is part of the trading activity for the month. The trading activity for each trading day is a piece of a larger puzzle.

In order to enhance our understanding of each day and the overall market activity, it is vital that we look at and analyze groups or composites of Profiles. Creating a composite Profile involves merging a number of different Profiles together. A merged Profile generates a single Profile for a number of different Profiles. This comprehensive

**Figure
7.6**

ES Mini Futures: Five Consecutive Daily Profiles



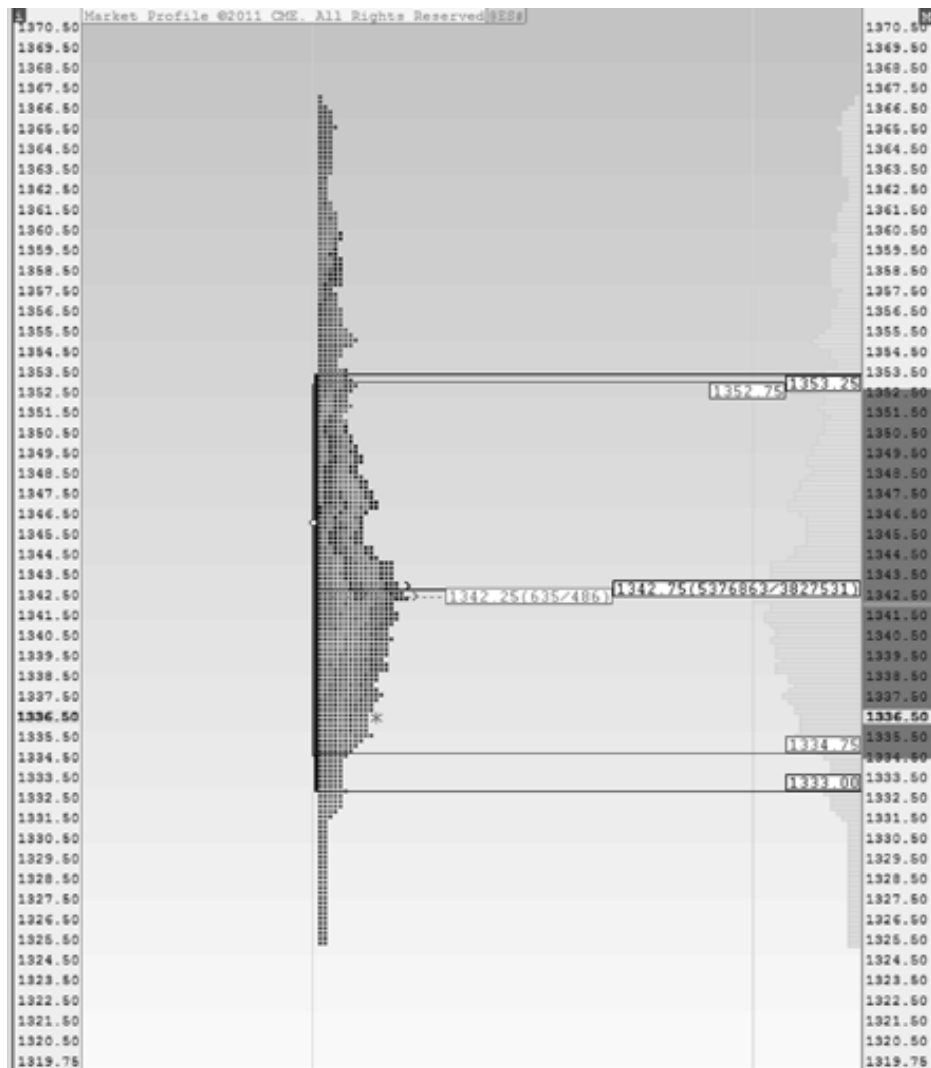
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picture provides a valuable perspective into the cumulative activity at different price levels.

In Figure 7.6, we have a chart showing five consecutive daily Profiles for the ES mini futures. The five days represent the daily market activity for U.S. session during the week of May 2, 2011. Once the Profiles are merged, a five-day composite or “weekly Profile” emerges, as shown in Figure 7.7.

Five-Day (Weekly) Composite Profile

**Figure
7.7**

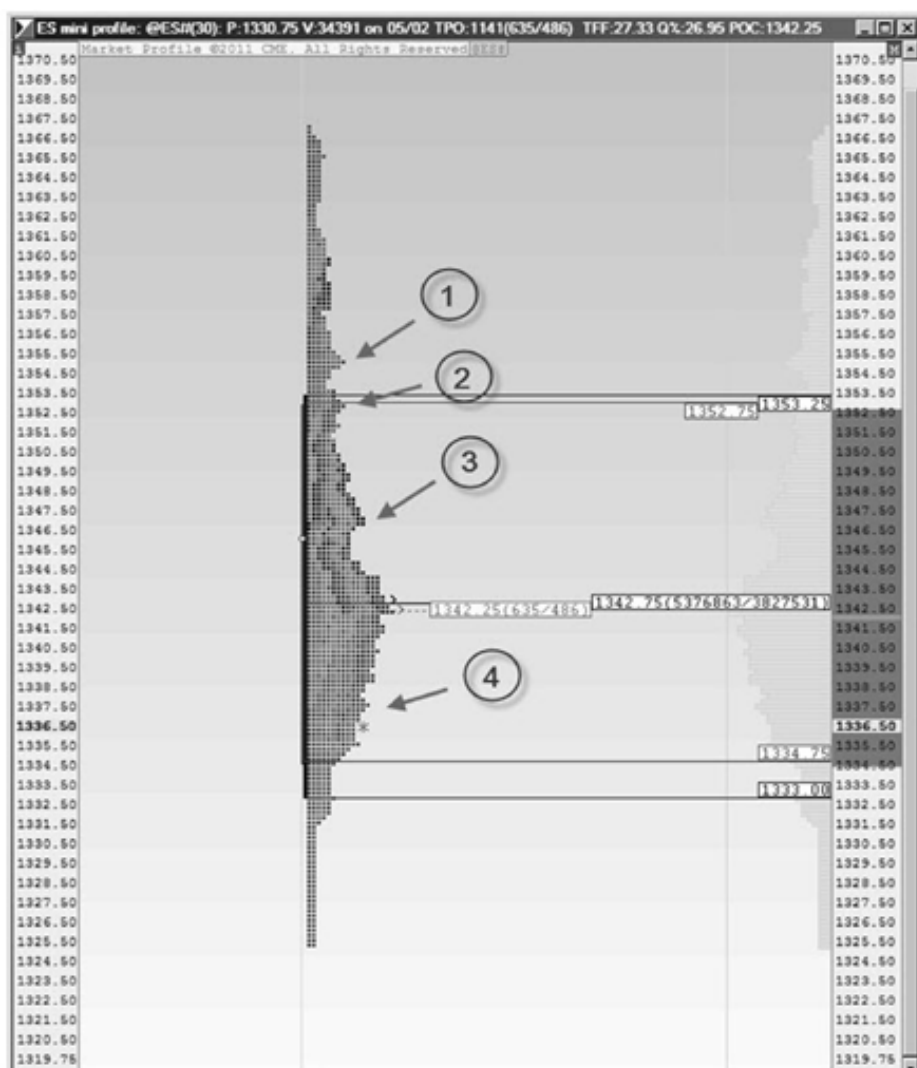


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This single weekly Profile has all of the characteristics of a daily Profile. It has its own value area, value area high, value area low, and a prominent point of control for the week. Moreover, we are able to identify several key price levels on the Profile. These levels are identified by the large number of TPOs that appear at these key price levels. In our class sessions, we identify these price levels as shown in Figure 7.8, and describe them as the “nipples” on the weekly Profile.

**Figure
7.8**

Key Price Levels Identified by Large Number of TP0s



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These “nipples” often become levels of support or resistance as prices re-visit them.

The weekly Profile offers an important perspective on the market for both short-term and long-term traders.

Consequently, the week’s composite Profile is an important Profile to study whether you are a daytrader or a long-term trader. As a day-

trader, the week's Profile provides the context for each trading day that will follow during the next week. Moreover, daytraders should never lose sight of the fact that it is the long time frame trader that influences the market. Looking at the larger picture and understanding where value is for the week is very valuable information for all traders. As the new week opens, traders can identify whether the new week's activity will remain in the same value area or if it will move away from the value area of the prior week.

From the long-term trader's perspective, the week's Profile is simply another important piece of the monthly market activity. A long-term trader will compare and evaluate market activity from one week to the next as well as each week's activity within the context of the monthly Profile.

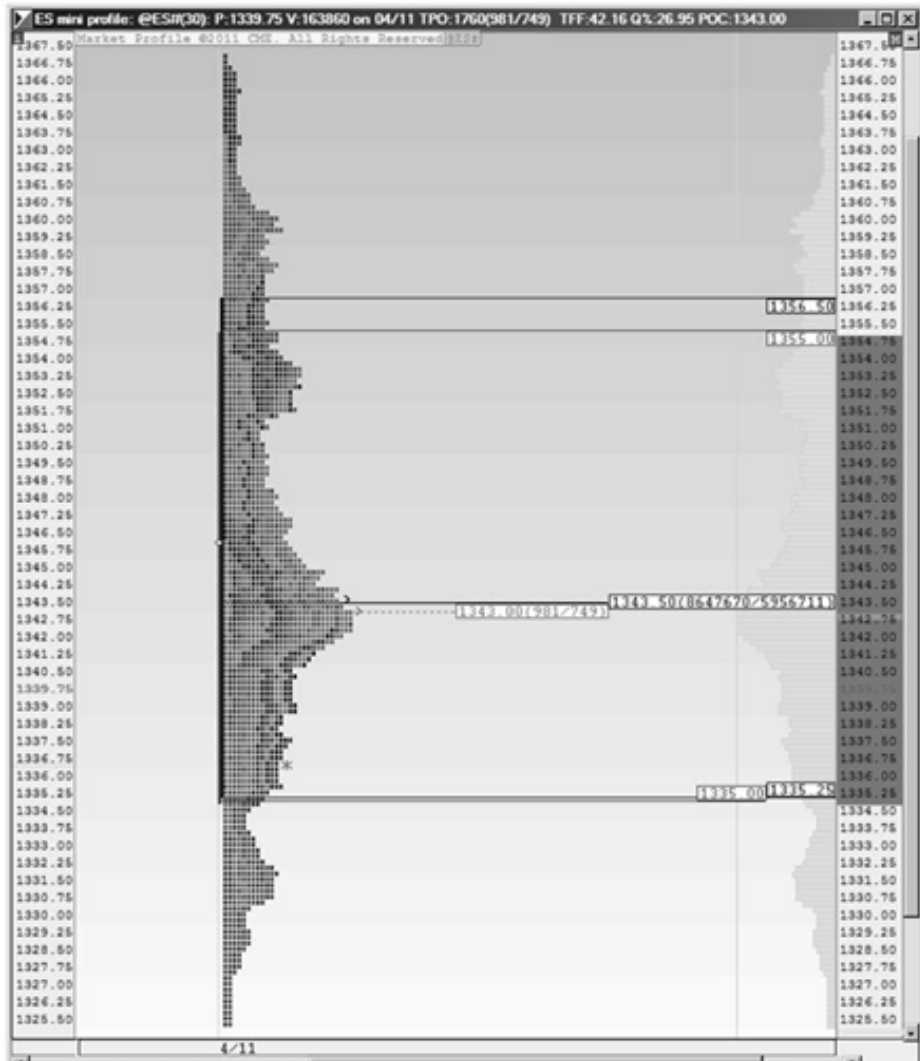
A monthly Profile is generated by merging twenty daily Profiles, as shown in Figure 7.9. Once again, the monthly chart has all the elements and characteristics of a single daily chart.

In comparing the weekly composite Profile to the monthly Profile, a number of significant observations can be made. The trading range for the month started at 1325.50 and rose to 1367.50, while the week's activity range also extended from 1325.50 to 1367.50. This indicates an extremely volatile week of activity. The points of control for the week and the month are also quite close. It is also important to note that, even though prices significantly dropped during the last week of activity, the market was still trading within the value area of the month.

Armed with contextual framework, traders can monitor price developments during the following week to determine how prices will behave at the lows of the monthly value area. The question that needs to be answered is whether the market will continue to drop below the monthly value area or whether it will find responsive buyers at the low of the monthly value area. If the market finds buyers at the lows, prices will simply return to the heart of the monthly value area.

**Figure
7.9**

Monthly Composite Profile



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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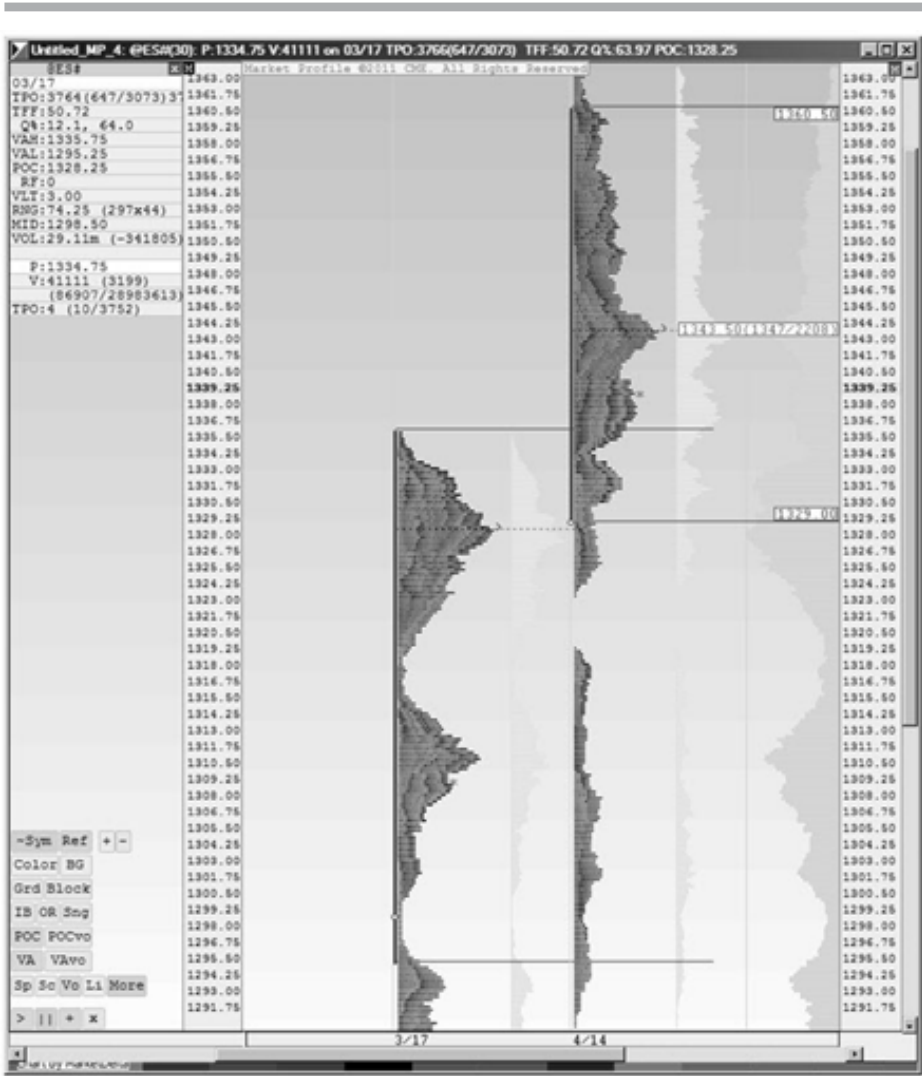
We will also observe that the “nipples,” or key price levels, become far more pronounced on the monthly chart. It is not a coincidence that these same exact levels are the ones that were identified earlier on the weekly composite. They just become more pronounced on the monthly chart. These are key prices that have experienced high levels of activity, making them worthy of our attention.

Naturally, we can also compare monthly Profiles from one month to the next. In Figure 7.10, we have two twenty-day Profiles on the same chart.

In comparing these two composite Profiles, we can immediately observe how the current month's value area low drops to the point of

Figure
7.10

Two 20-Day Profiles



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For a closer look at this chart visit www.traderslibrary.com/TLEcorner

control of the prior month at about 1328.50. Note how the key price level from one composite Profile is still a relevant and key level in the following month. If prices do continue to drop below the 1329 price level, we would expect the next major level of support to be at the lower nipple on the prior Profile at a level of approximately 1310.50, even though the TPO counts at the points of control for both month are about the same, with the current month at 39 and the prior month at approximately 44. Nevertheless, we can observe that the structures and extent of development for each month are quite different. Note how in the prior month, the point of control was quite close to the value area high, while in the current month, the point of control lies much lower in the value range at about the midpoint of the range. Another bullish move up is not likely to occur until the current Profile is more developed and balanced.

Comparisons of larger composite Profiles are always helpful in our analysis of the market and in providing us with many valuable insights about market activity and potential direction.

Chapter Seven Quiz

1. Splitting a Profile simply involves breaking up the Profile structure into separate and distinct periods.
 - a. True
 - b. False

2. The outcome of trading activity for the first hour of the day has a strong influence on the trading activity that follows during the morning session.
 - a. True
 - b. False

3. The settlement period for any instrument is an especially critical decision-making period for any daytrader who is carrying a large inventory at the end of the day.
 - a. True
 - b. False

4. The afternoon session is always a continuation session for the morning activity. The market simply resumes the same activity and direction for the morning.
 - a. True
 - b. False

-
5. The financial markets are now global in nature, and capital flow in many markets has a 24-hour cycle.
- a. True
 - b. False
6. The rotational factor is a simple numeric summation of an assigned value for the consecutive levels of highs and lows for the various periods on the split Profile.
- a. True
 - b. False
7. A merged composite Profile chart is a single Profile chart that includes a number of different consecutive Profiles.
- a. True
 - b. False
8. Every Profile structure that we examine should be analyzed as a part of a larger or broader Profile structure.
- a. True
 - b. False

9. The weekly Profile offers an important perspective on the market only for the long-term traders and investors.

a. True

b. False

10. When comparing the weekly composite Profile to the monthly Profile, we will find the value area is exactly the same for both Profiles.

a. True

b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.



VOLUME AND VALUE TRACKING

The importance of understanding and tracking volume activity cannot be overemphasized in any electronic exchange market. Volume is the single most powerful variable in the market because it is the only element which is not derived from price action. It is actually the catalyst that influences market price action. Many traders often make the mistake of thinking that price movement cannot occur without large volume. While large volume signifies important market action and demonstrates strong market conviction for a move, markets can and do move on light volume. Low volume is often the playground for smart money. During low volume periods, smart money uses its resources to probe different price levels and run tests to explore the degree of supply or demand in the market, or even to set traps and shakeouts for other market participants.

Volume is the single most powerful variable in the market because it is the only element which is not derived from price action.

High volume on the other hand, signifies that smart traders have made certain decisions and are working towards a specific goal. In this case, the level of volume is a function of their conviction and confidence in pursuing their goals. Volume becomes the fuel that powers the desired move.

By definition, volume is simply the number of units that are traded during any given period of time. However, it is important to keep in mind that every trade requires a seller and a buyer for the transaction to occur. Price movement is the result of shifts between supply and demand for a specific instrument or security.

Prices move as a result of the relative enthusiasm of buyers or sellers. If sellers are more motivated than buyers, prices will decline. If buyers are more aggressive in the market, prices will move higher.

Open Interest in Futures and Options

In trading future contracts and options, we are conducting two party trades. There is both a buyer and a seller for every traded contract. As a result, at the end of each trading day, there are usually a number of outstanding or unliquidated contracts. These outstanding contracts are known as the open interest.

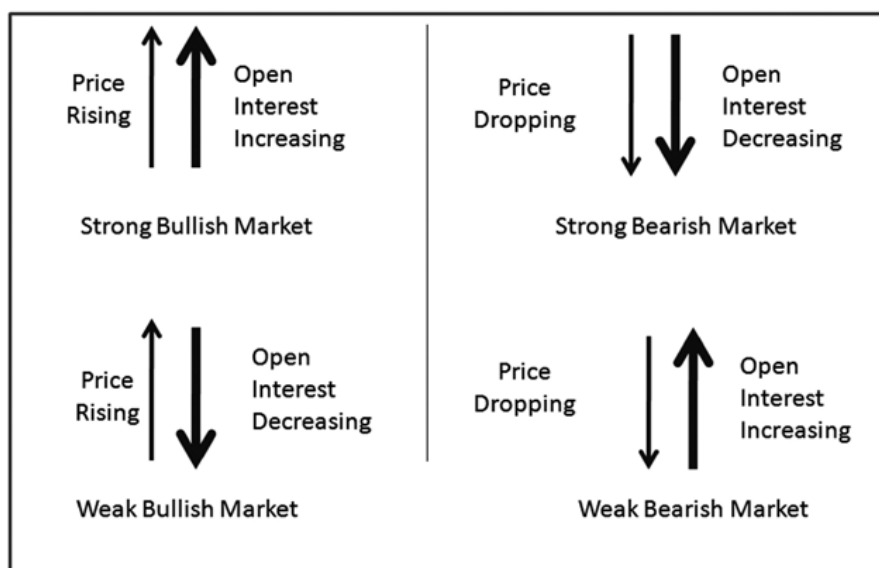
Open interest represents the total number of outstanding long or short positions in the market, not the sum of both. The open interest numbers reported at the end of each trading day are followed by either a positive or negative number indicating the increase or decrease in the number of contracts for that day. The open interest is often used to gauge the sentiment of market participants. The assumption

is that if the number of open interest shorts is increasing, then the market must be bearish and if the number of open interest longs is increasing, then the market must be bullish. The open interest levels give us an indication about the technical strength of the market, as seen in Figure 8.1. If both prices and open interest are increasing, the market is technically strong. On the other hand, if the prices are rising while the open interest is dropping, the market is technically weak. The inverse relationship exists for a bearish market.

This technique is not always as reliable an indicator of market sentiment as it may seem since many market participants in both the options and futures markets are hedgers and not speculators. The open interest is not necessarily an indication of market sentiment. There are many different hedging strategies that are involved in the open interest count and they can easily skew the open interest numbers. Consequently, the numbers do not always accurately reflect actual market sentiment. Nevertheless, as traders, we need to understand and look at open interest as part of the overall analytical process.

**Figure
8.1**

Open Interest and Prices



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Every time a trade is transacted, the open interest is affected in one of three possible ways: the open interest number may increase, decrease, or simply stay the same. The open interest will increase when both the buyer and seller are initiating a new position and a new contract is started. The open interest does not change when the buyer initiates a new long position, and the seller is merely liquidating an existing long. One participant is entering a trade while the other is leaving his trade. The net result is no change in the open interest.

**Every time a trade is transacted, the
open interest number will either increase,
decrease, or stay the same.**

If a trader buys to cover an old short position and another trader sells an existing long position, the open interest will decrease. If both participants in a trade are opening a new position, the open interest will increase. If both traders are liquidating existing positions, the open interest will decrease. If on the other hand, one is initiating a new position while the other is liquidating an existing position, there will be no change in the open interest.

Some analysts look at both volumes and open interest numbers to determine possible market direction. If both volume and open interest are increasing in the direction of a move, the assumption is that the move is likely to continue. While if volume and open interest are both decreasing, the analyst would view that as weakness in the current trend.

Traditional Volume Analysis

On traditional candlestick and bar charts, volume is usually displayed in the charts as a series of bars on a histogram below the price. This form of presentation merely reflects expansions and contrac-

tions in volume activity. On most bar charts, volume will typically be displayed on the lower portion of the chart. Volume levels are plotted below each price bar. The color of the volume bar corresponds in color to that of the price bar.

Many technical analysts use this volume histogram as a confirming indicator for trends and chart patterns. Any price movement up or down with relatively high volume is seen as a stronger, more potent move than a similar move with low volume. If volume is starting to decrease in an uptrend, it is usually a sign that the upward run may be about to end.

Volume and Profile Charts

Even though some of the principles for volume analysis may be the same as those used on traditional charts, as Profile traders, we will approach, study, and use volume in a different way.

Volume is an integral element of the Profile, since the Profile is built based on market activity and market activity is generated by trading volume. Consequently, it is important to highlight the fact that for us as Profile traders, volume forms the bedrock foundation for our analysis. We are continually comparing the Profile or activity distribution to the volume distribution for each session. This allows us to conduct what I describe as a “multi-dimensional” volume analysis. The Profile allows us to track and analyze volume activity in a variety of ways that are not possible on any other type of chart.

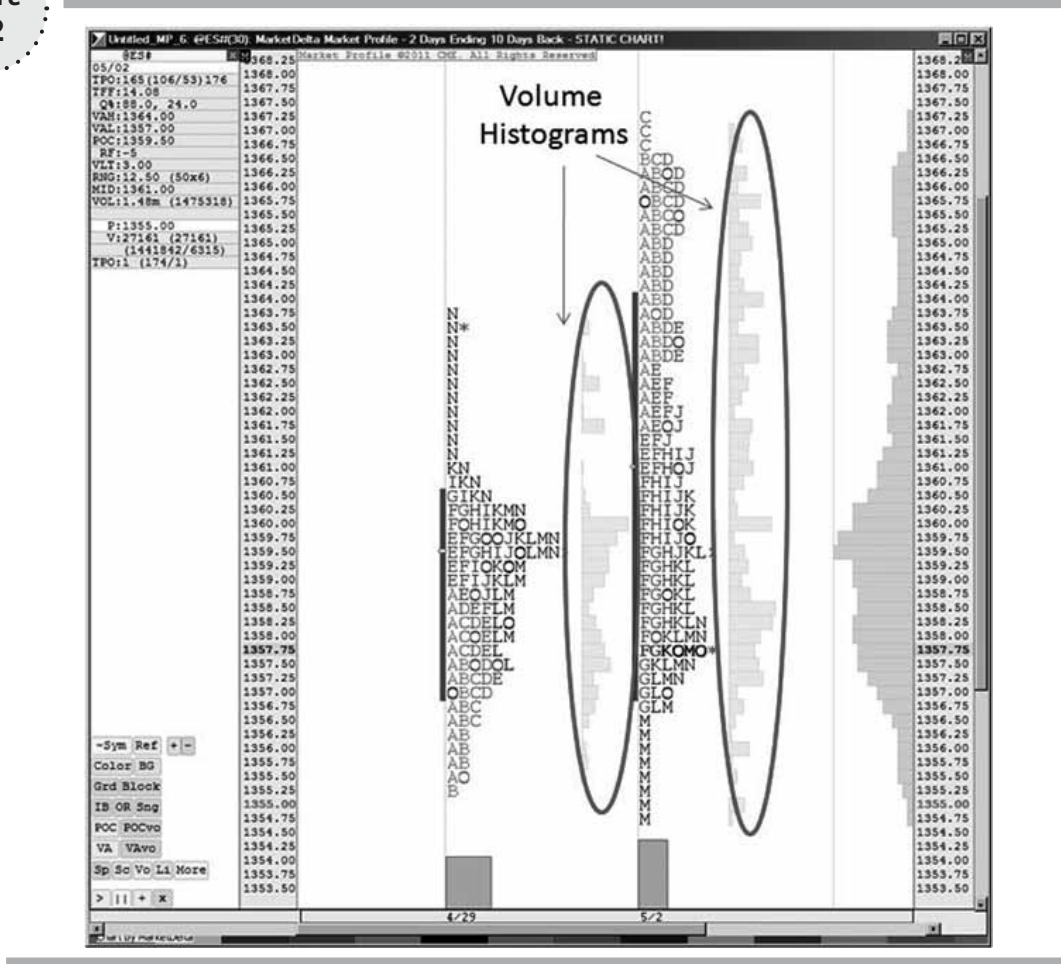
On a Profile chart, volume information can be displayed in a number of different ways. It can be displayed as a histogram directly below the Profile or directly next to the Profile as observed on Figure 8.2. In looking at the volume Profile next to the Profile, our focus is no longer on the cumulative volume for a bar or a specific period of time. Instead, our focus is on the volume level at each price level. The histogram next to the Profile shows us the extent of volume traded

at each price level. The longer the bar on the histogram, the greater is the volume that was traded at that price.

This type of Profile volume display helps us to easily and quickly identify the price levels at which the greatest levels of market activity took place during the session, or in other words, the price levels that were most accepted by the market participants. The price levels that attracted the most activity during the session were the price levels around fair price.

Figure 8.2

Volume Histograms

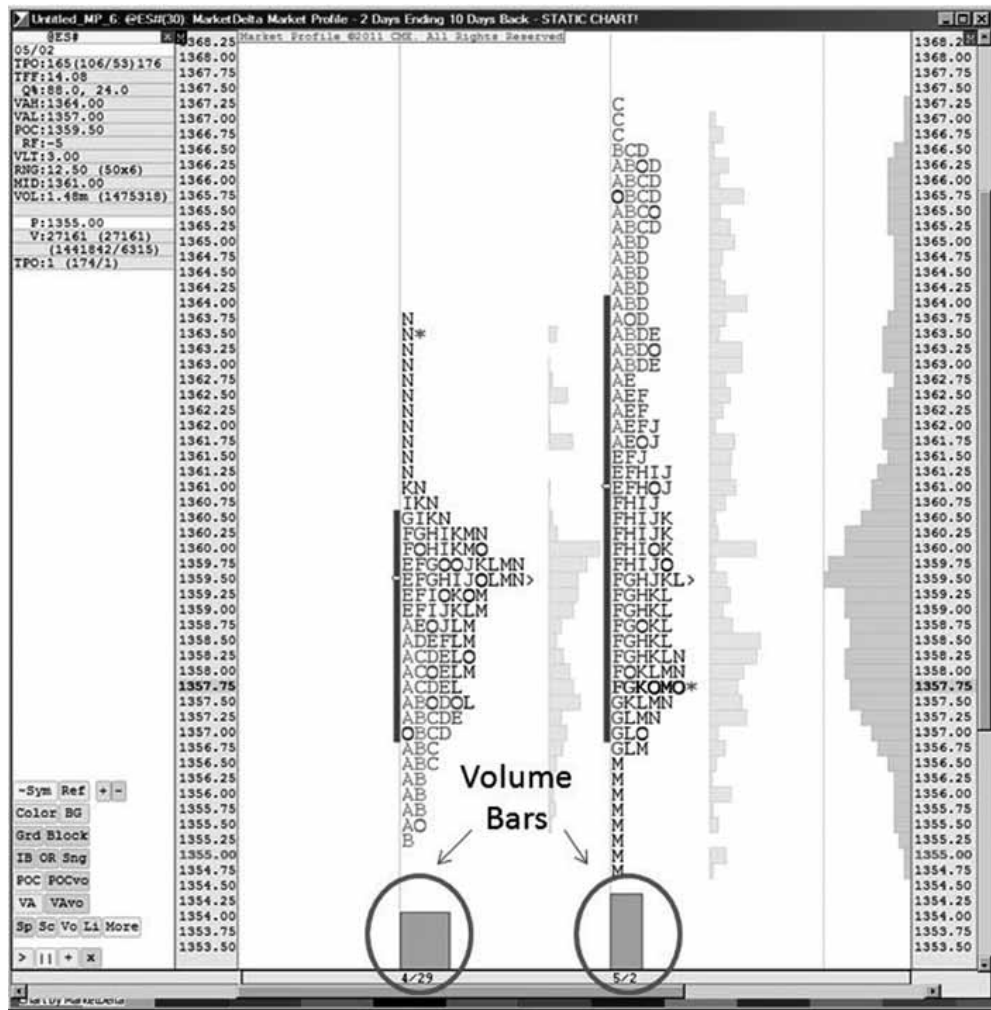


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We can gain other valuable insights by carefully studying the size of the histogram bars on the volume Profile. For example, if we look at Figure 8.2, on May 2, we observe that during period D in the morning session there was a noticeable increase in volume activity at the price level of 1365.75. Subsequent to this increased volume activity, prices dropped lower, indicating that this activity represented selling.

Figure 8.3

Cumulative Profile Volume



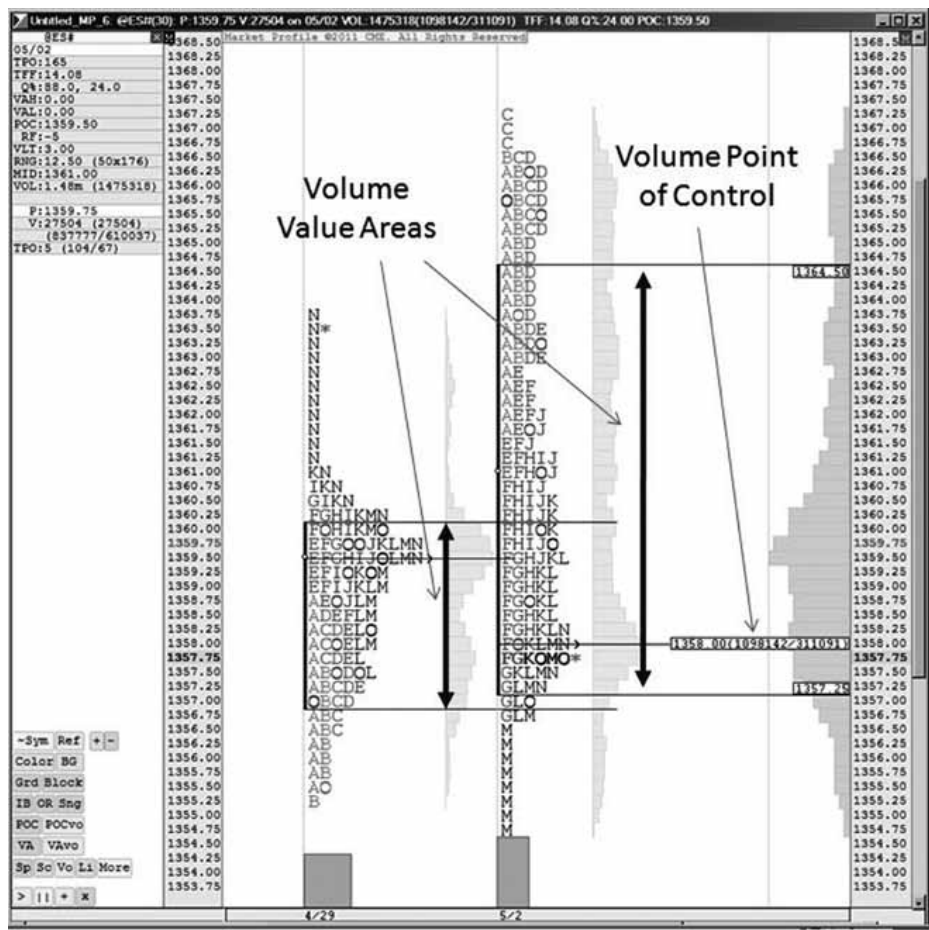
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The next large volume bar appears at the price level of 1364 and once again prices continue to drop lower, reaffirming the fact that there is selling pressure in the market. The session continues to move lower until a fair price is established at about 1359.50, and the market distributes around this price. This is evident by the cluster of volume histogram bars that appear above and below this price level.

The Profile chart also displays a single bar below the Profile representing an image of the cumulative volume for the Profile above, as

Figure 8.4

Volume Value Areas and Point of Control



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shown on Figure 8.3. This is similar to the histogram bars that we would find below price bars on a traditional candlestick or bar chart.

On a Profile chart, we are also able to identify the volume value area, the volume value area high, the volume value area low, and the volume point of control as shown in Figure 8.4.

Moreover, the Profile also displays for us the exact volume above and below the volume point of control. In comparing the amount of traded volume above and below the volume point of control (VPOC), it becomes evident that the volume of 1,098,142 contracts for the ES mini futures is significantly higher than the figure of 311,091 contracts that were traded below that VPOC. There is a significant imbalance in the market at this level.

Since the market closed at 1357.75 towards the low of the day's range on May 2, we can deduce that the heavy volume above the VPOC had to have been selling volume. As a result of this selling volume, prices were pushed lower, back to the low of the day's range.

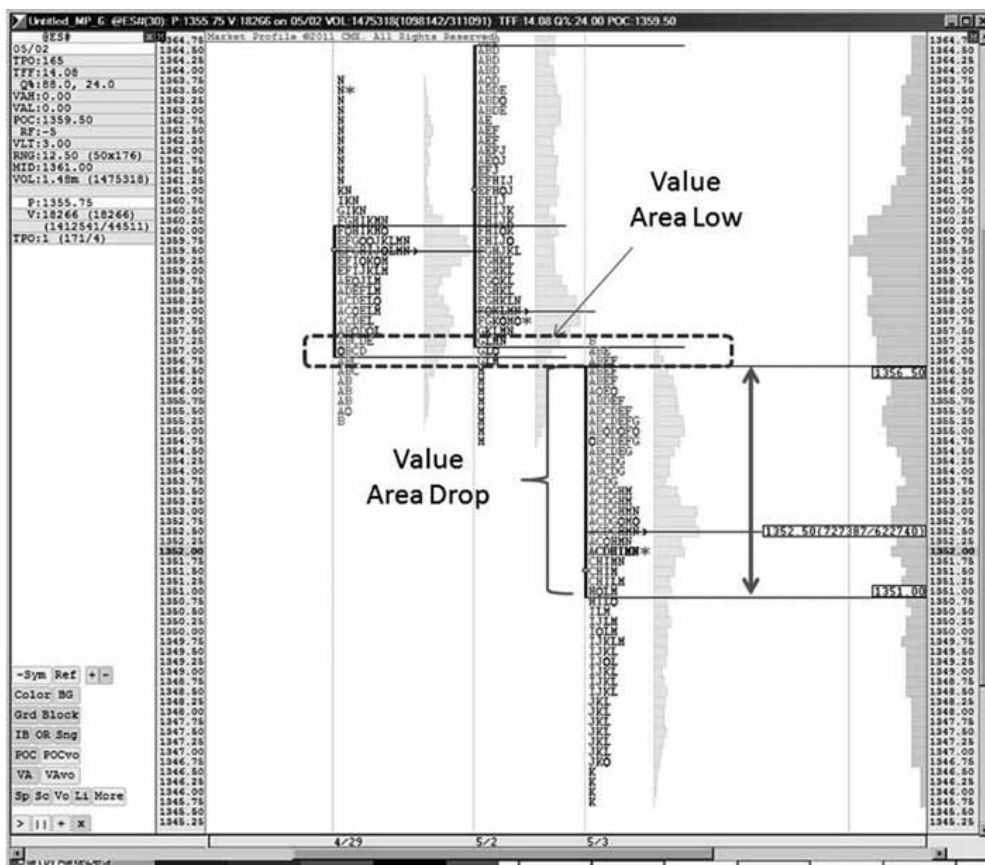
In Figure 8.4, we have displayed lines at the volume value area high, the volume value area low, and the VPOC levels. These important key levels help us to track and understand the flow of volume in the market. On the chart in Figure 8.4, we observe that on April 29 the market had a small volume value area that extended from 1356.75 to 1360. On the following trading day of May 2, the market attempted to expand this volume value area and prices actually rose to a value area high of 1364.50.

However, by the end of the session, prices had dropped back lower to close at a price level of 1357.50, effectively bringing prices right back to the lower part of the prior day's volume value area.

The day's volume activity indicated a clear rejection of prices that were above the volume value area of April 29 and highlighted a bearish sentiment in the market. Furthermore, on the chart in Figure 8.5 on May 3, the market opens the U.S. session lower at 1354.75, an

Figure
8.5

Open Price Below Prior Volume Value Area Low



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open price that is well below the prior day's volume value area low. During periods A, B, E, and F, the market attempts to return back above the prior volume value area low without success. The volume value area low level of approximately 1357.25 now becomes a level of resistance.

This activity indicates that sellers are now the dominant force in the market and that the market participant perceptions of value are in fact dropping. Naturally, this means that prices are more likely to continue to move lower. Sure enough, on May 3, the market drops to a low of 1345.75 during the K period and creates a new lower volume

value area low at a price level of 1351. However, buying volume came in and overtook the sellers at these low levels, moving prices back up above the value area low in both periods L and M.

Once again, if we take another look at the traded volume above and below the VPOC for May 3, we will note that there were 727,387 contracts traded above the VPOC and 622,740 contracts traded below that point. The difference or imbalance is no longer as significant as it was on May 2. The extent of the selling volume pressure is significantly lower.

In addition to the volume Profile and the volume value area data derived from the Profile, the chart also includes a dynamic display window in the top left hand corner that provides the exact values for volume figures at each price level as well as for the entire Profile.

This volume information derived by looking at the actual Profile chart significantly enhances our understanding of market activity and how volume has influenced the market at each price level.

We will now look at volume through the kaleidoscope of market auction theory and intraday activity as it occurs in the market.

Volume and Market Auction Theory

Price and volume are the two key variables produced by market activity. Market activity is produced as a result of the market auction. Auction Market Theory helps us to understand how volume and price data can be analyzed and interpreted in the context of the market auction. Prices are continually moving and changing in the market. These changes may seem to some as random, chaotic or haphazard. However, nothing could be further from the truth. There is an orderly auction process for every instrument in every market. The auction process continuously regulates the changes in price that

are observed in any market. The market auction process is an orderly and dynamic process.

**Auction Market Theory describes how
volume and price data can be analyzed and
interpreted in the context of the market auction.**

The auction is continually changing from a state of balance to a state of imbalance. This constant state of flux results in the constant price fluctuations that are observed in the market. The auction process is the mechanism that regulates the order flow and thus price movement in the market. There are a number of basic rules for the electronic auction market that every trader needs to learn and understand.

1. The auction process functions on the basis of a bid price and an ask price. The bid price is the price that a buyer is willing to pay, and the ask price is the price at which a seller is willing to sell.
2. A trade will only occur if the seller accepts the bid or the buyer is willing to pay the ask.
3. Increased demand in the market will lift the bid price higher and a large supply will push the ask price lower.
4. Aggressive buyers are willing to buy at the ask and aggressive sellers are willing to sell at the bid.
5. Order flow and the volume size of each order determine the direction and extent of price movement.
6. If the auction encounters buyers at a certain price level, it will move prices higher until there are no more buyers or, in other words, the auction up will be halted at the price level where sellers are found in the market. When the auc-

tion encounters sellers, it will start to auction lower until it finds buyers.

7. The auction is always searching for the opposite of what it finds.
8. The direction and the extent of price range expansion for any given session is determined by the order flow of the bid and ask trading volume.
9. The extent of a directional move is determined by the degree of imbalance between the volume levels at the bid and the ask.
10. There are multiple concurrent auctions taking place in the market at any given point in time.

Order Flow Analysis

Volume and order flow help us to identify who is in control of the auction process. The auction is the market mechanism that attempts to match supply and demand. Demand in the market simply means the presence of buyers at a certain level. On the other side of the coin, supply implies the presence of sellers that are willing to supply the market.

The economic principles of supply and demand tell us that demand for an item increases when prices are low, and as prices increase, the quantity demanded decreases. These same principles also dictate that supply increase when prices are high enough. In other words, more sellers are attracted to the market at high prices. The purpose of the auction is to facilitate trade in the market and to efficiently manage market supply and demand.

When demand increases in the market, the auction simply auctions higher and the buyers are in control of the auction. As soon as prices

reach a high point that curbs buyers' demand, the sellers become eager to step in and supply the market at these high price levels. As this begins to happen, the auction begins to move lower, and the sellers gain control. The auction will continue to drop prices and progressively move lower seeking to create demand and attract buyers into the market.

One of the powerful tools available for us to view the auction market in action and to analyze order flow is the Footprint chart, available on the Market Delta platform. The Footprint chart allows us to look at market auction data in real time. It helps to visually display this data in an orderly fashion. It provides traders with what I call "x-ray" vision into the market.

Order flow analysis is the process of tracking how orders are coming into the market, how they are being filled, and identifying whether they were executed at the bid or at the ask. The Footprint provides us with an open window into the actual auction process.

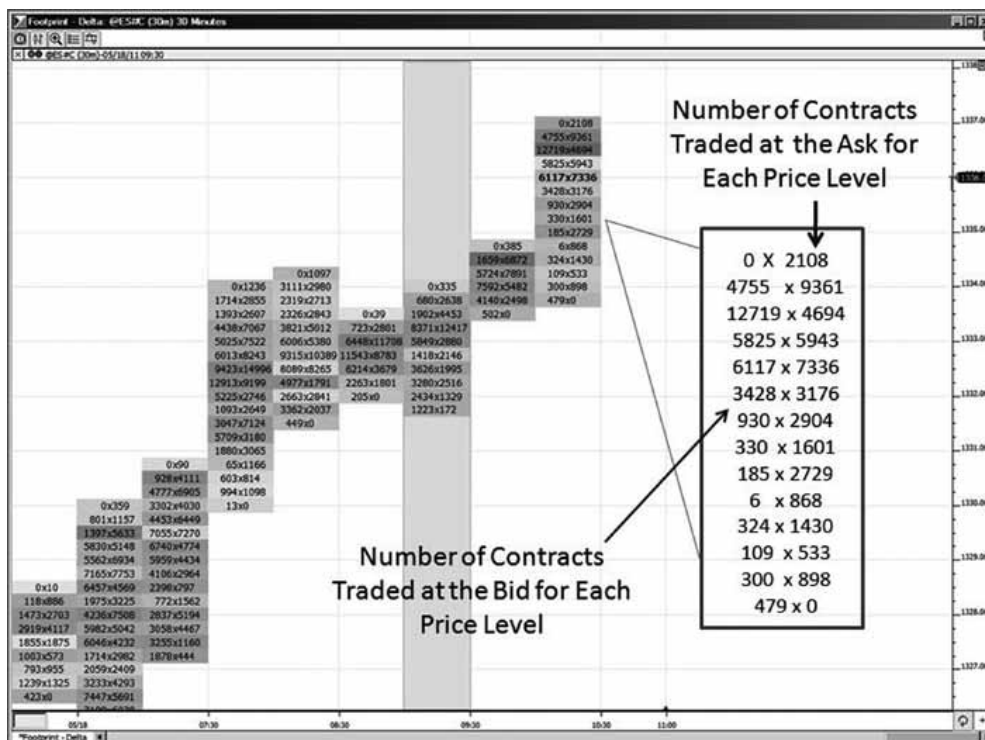
The auction process has always been at the heart of trading activity. Professionals and floor traders in the past often tracked order flow by looking at the time and sales tickets. This process was known as "tape reading." Tape reading was always considered one of the most reliable methods to follow the market because it always provided an accurate picture of the activity in the market.

Footprint Charts

Technology now makes the process of tape reading or order flow analysis simpler and easier. The Footprint and other new tools are continually making the process of understanding and analyzing order flow more accessible to many traders. The Footprint chart, as seen in Figure 8.6, basically offers a graphical price ladder that displays bid and ask volume at every price level for a specific period or session.

**Figure
8.6**

Thirty-Minute Footprints



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The Footprint chart in Figure 8.6 is based on a thirty-minute period during the trading session. The period for a Footprint chart can easily be adjusted based for the type of analysis that is required. Since the Profile is based on a thirty-minute increment, the thirty-minute period was selected for our Footprint chart illustration.

The Footprint chart offers a graphical price ladder that displays bid and ask volume at every price level for a specific period.

Each Footprint shows us the range of price movement for the period, the volume that was traded at the bid, and the volume that was traded at the ask for each price level within the bar. In the case of

the bar that we have selected and magnified on the chart, the thirty-minute period began at 10:00 a.m. and concluded at 10:30 a.m. This bar corresponds to the H column on the day session's Profile. The price range for the bar extended from 1333.75 to 1337.

The volume number that appears on the left hand side of the Footprint represents the quantities that were traded at the bid, while the quantities on the right-hand side represent the volume that was traded at the ask. The total traded volume for this thirty-minute period was 83,341 contracts. During this period the sum of 45,084 contracts were traded at the ask, while the balance of 38,257 were traded at the bid. It is evident that the majority of the transactions that took place during this period were conducted at the ask. The volume traded at the ask for the period exceeded those at the bid by 6,827 contracts. This bullish volume extended the range high of the bar above the prior bar and the low for the bar was even higher than the prior bar's low.

The buyers were clearly in control during this thirty-minute period; consequently, the market auctioned prices higher.

Reading the Footprint

There are a number of different ways to track and follow order flow using the Footprint. Color is often used to facilitate the reading process. As the market trends down, the Footprint displays a red color in the background of each price cell, and green when the market is trending up. The intensity of the color increases as the selling or buying pressure increases. A sign of a strong trend is when the upper or lower prices of a bar are the darkest color. It would be a dark green for an uptrend and a dark red for a downtrend. These intense colors are most valuable at the beginning of a trend. If they appear late in the move, it may simply be an indication that the herd is attempting to participate in the move as it is about to end and reverse. Understanding and learning to track order flow using the Footprint will

allow traders to see when a move is starting to lose momentum as the colors start to change and lighter shades of the dominant color begin to appear.

When the markets are non-trending, the Footprint also displays the uncertainty in the market. Each Footprint bar will have a blend of red and green colors. This combination is often described as a “candy cane” pattern. This pattern will be visible when the market is balanced and prices become range bound.

Traders will observe more clusters of dark Footprints in a trending market. They will be able to visually gauge the strength of the move as prices move higher or lower.

To see Footprint charts in color; GO TO: www.traderslibrary.com/TLEcorner.

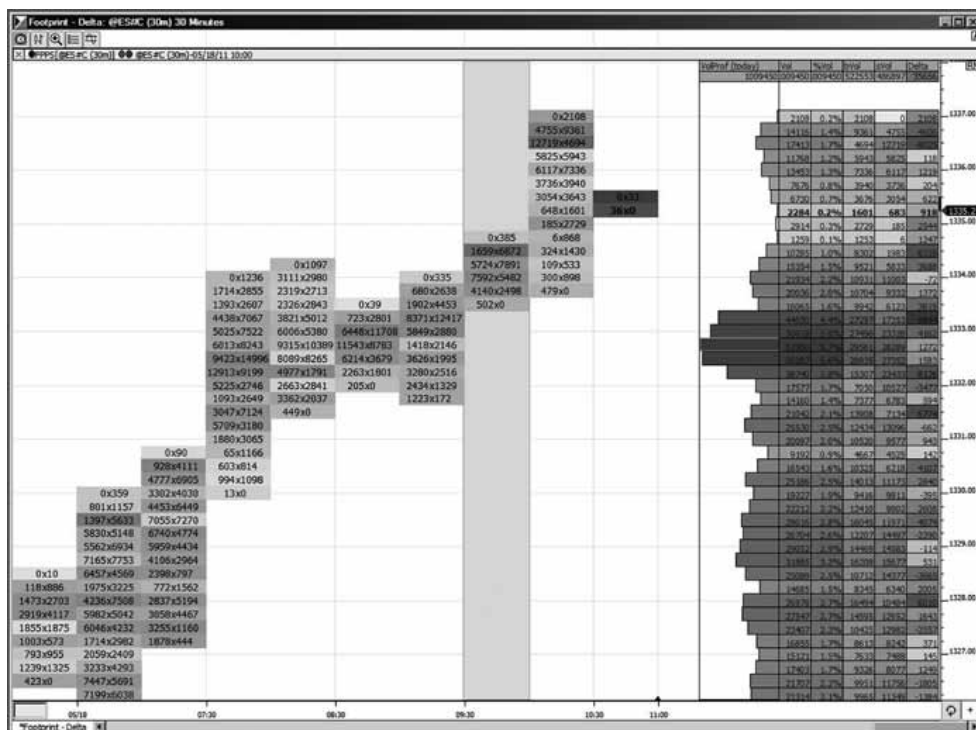
Footprint Delta

The delta for a Footprint bar is calculated by subtracting the total bar volume that traded at the bid from the total bar volume traded at the ask. If the calculated delta is positive, that is indicative of more aggressive buyers. Negative delta is a sign of more aggressive sellers. When price is moving higher, it should be accompanied by a positive delta for the bar to confirm that aggressive buying is supporting and sustaining the move. The inverse is true for a down trend; there should be a negative bar delta to confirm more aggressive selling.

In a non-trending market, the Footprint bar delta will typically switch back and forth from positive to negative and back, reflecting the uncertainty in the market. If the market is consolidating but the bar deltas are all pointing in one direction, this is a sign that price will soon break out of the range in the direction of the bar deltas. Naturally, in the case of a positive delta, prices would break to the upside and break down in the event of a negative delta.

**Figure
8.7**

Footprint Price Statistics Ladder



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Footprint Price Statistics

It is important for us to place the activity of each thirty-minute bar within the context of the entire day's session. We can add on our chart a Footprint price statistics ladder, as shown in Figure 8.7.

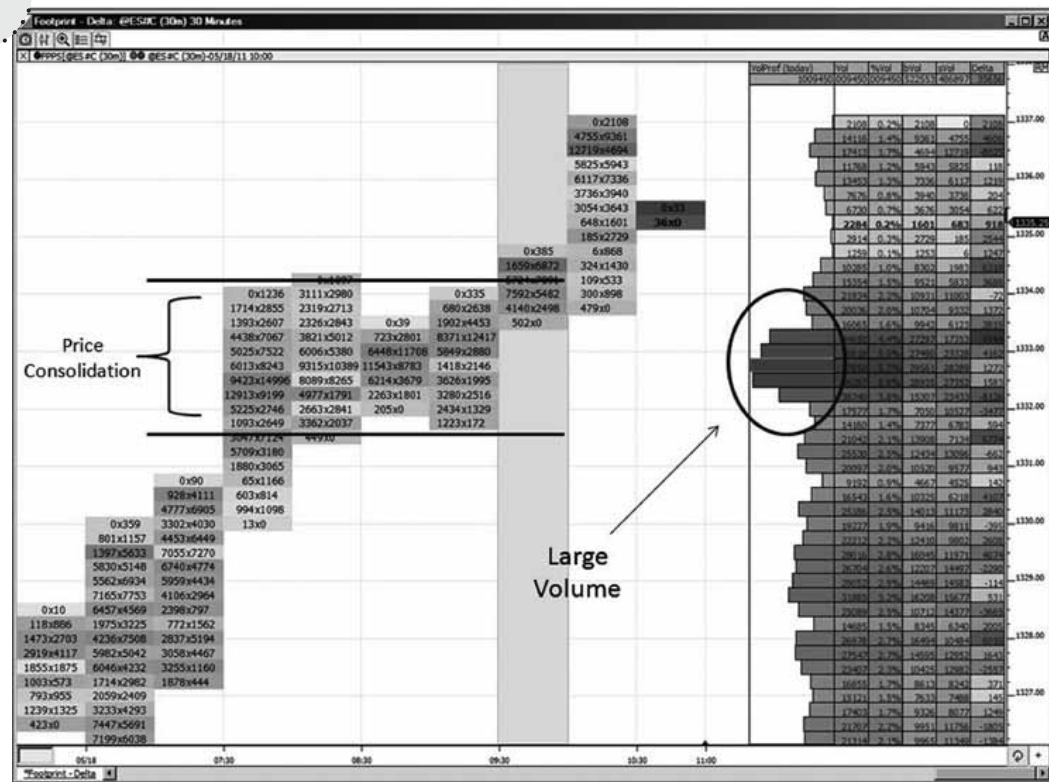
The Footprint price statistics ladder allows us to display a variety of useful information. The first column on the chart includes a volume Profile histogram; the next column displays the total volume traded at each price level for the session, followed by a column indicating the percent that this volume represents out of the total sessions' volume. The next two columns break out the total volume at each price into buying and selling volume. The last column simply displays the difference between the buying volume (volume traded at the ask) and selling volume (volume traded at the bid).

There are a number of different ways to use this valuable data. For example, we can immediately identify price levels where the market experienced a large volume of activity. In Figure 8.8, we can identify that over twenty percent of the day's volume trading activity took place within the price range of 1332 and 1334.50. Moreover, by comparing the buying and selling volume levels, we are able to determine that the volume at the ask was greater at most of the price levels where the high volume occurred.

Furthermore, during the trading day, we are able to see that the market activity consolidated during this high volume range. More importantly, the volume statistics clearly indicate that the buyers were dominant during this period of consolidation.

Figure 8.8

Price Consolidation During High Volume Range



As a result, it should not come as a surprise to us when price broke out higher above this consolidation range. This detailed volume data is invaluable for any intraday trader. Understanding and interpreting the Footprint bar statistics along with the day's volume statistics provides traders with a level of transparency into the market not found on traditional charts.

Value Tracking

The concepts of volume and value are intertwined. As a matter of fact, value is identified based on market activity, and market activity is in turn generated by trading volume. The basic concept of identifying value in the market relies on our ability to define a normal distribution for volume activity. Once we identify the value area on a daily Profile chart, it is simple to compare the location of the value area of one day to other days.

The concepts of volume and value are intertwined. Value is identified based on market activity, and market activity is in turn generated by trading volume.

The Profile offers us the flexibility of displaying short term Profile distributions to monitor developments intraday. This can be done, but it requires that we adjust the parameters for the Profile. We need to create a smaller Profile for the larger daily Profile.

Instead of looking at a Profile for the full day, we can look at a Profile for each thirty-minute period within the trading day. We would simply break the thirty-minute period into six segments of five minutes each. This will show us the auction process as it develops for each thirty-minute period. In Figure 8.9, we have a complete daily Profile of the ES mini futures contracts for May 20, 2011.

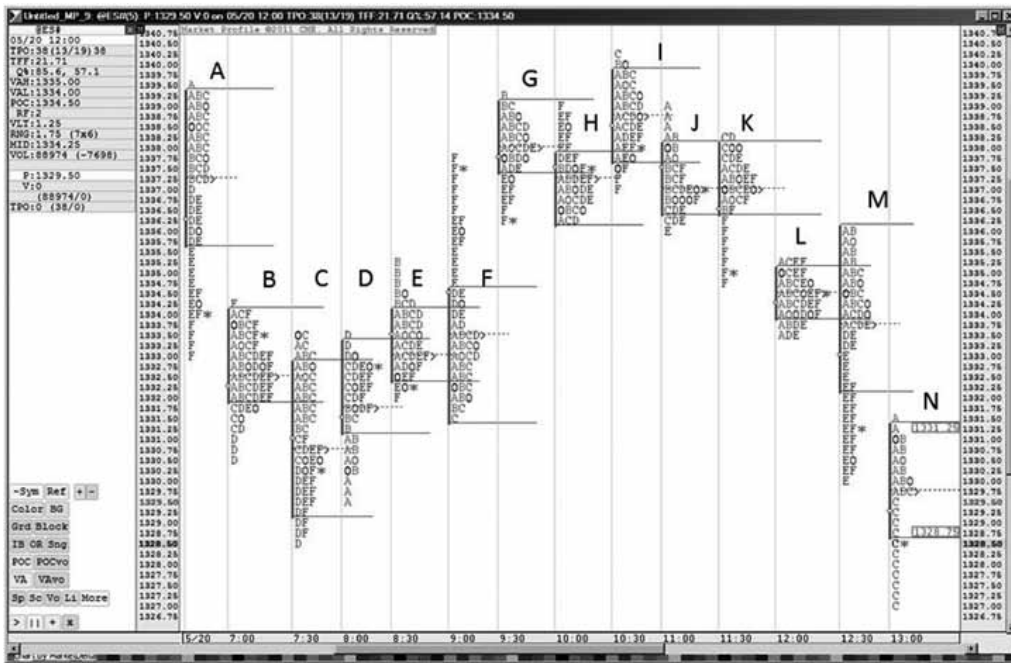
In Figure 8.10, we can observe how during the first 30-minute period A, the value area expanded lower. During this first half hour, the last

Value Area Development: May 20, 2011 ES Mini Figures



Value Tracking Periods

Figure
8.10



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two periods E and F dropped outside of the value area for period A. In period B, we observe that the period opens below value and value continues to drop lower. In period C, value continues to move lower and period C closes towards the low of the period. However, in period D, value starts to move higher, indicating a shift in the market. Period D closes just below the value area high for period C. Period E continues to move value slightly higher.

As period F opens, the market drops to test the lows of the value area D during the first ten minutes of the period. The value area low holds and prices never break below the value area low of period D.

Now confident of this support level, the market takes value higher in periods F, G, H, and I. However, in period J, the low of the prior period is tested and it did not hold. Consequently, the market loses some of the directional confidence. In period K, the market once again breaks the value area low of period J and continues to take

value lower in periods L, M, and N. Concluding the day with a close just below the value area low of the N period (the settlement period for the day).

It is important to note how the market attempted unsuccessfully to probe higher during the first two five-minute increments of period M. The prior value area low for periods J and K became a level of resistance that could not be pierced for the move higher. At that point, it became apparent that a bearish sentiment had set in and the market would be dropping as it did.

It is also worthy to note that the value area low for period N at 1328.75 is at just about the same value area low for period C, the same point where prices found support and started to move higher earlier in the day.

In addition to looking at the actual order flow, tracking value and identifying value area lows and highs can greatly help us in gaining additional insights about market sentiment and participant behaviors during the day.

Liquidity Data Bank

Our discussion of volume would not be complete without a brief look at the Liquidity Data Bank (LDB). The LDB is a report that is available for a fee from the Chicago Mercantile Exchange (CME) group. It offers traders an additional powerful tool for analyzing volume. The LDB only includes data for products that are traded on Globex and in open outcry trading. No ex-pit transactions (blocks, EFP, EFR, etc.) are available in the LDB.

The LDB provides an in-depth data source revealing a precise report of market activity. It summarizes and reports trade data using a Customer Trader Indicator (CTI) code, which specifies who executed the trade. The exchange has created the following codes to identify the market participants.

CT1	Member trading for their own account
CT2	Commercial trading for their own proprietary account
CT3	Member trading for another member
CT4	All others or general public funds

Typically, in analyzing the LDB report, traders will examine the different levels of activity for each of the participants. A special consideration is usually given to commercial or CT2 activity levels on the report. If there is an increase in CT2 activity, it is because they believe that prices are away from value. If they are selling at the highs, this could be a signal that market is topping out and if they are buying at the lows, this could mean that the market is undervalued.

All data on the report needs to be carefully studied and analyzed. The data is only meaningful when properly analyzed in the context of market developments and in comparison to historical activity levels.

This data for CBOT products is produced every 30 minutes during regular trading hours and every 15 minutes during electronic trading hours. The LDB report allows traders to identify which traders are driving the volume and at what prices. Samples of these reports can be obtained from the CME website (www.cmegroup.com).

Chapter Eight Quiz

1. Volume is the only variable on a technical chart which is not derived from price action. It is actually the catalyst that influences market price action.
 - a. True
 - b. False

2. Volume for any financial instrument is simply the number of units that are traded in the instrument during a given period of time.
 - a. True
 - b. False

3. In trading futures contracts, the open interest represents the sum of both outstanding long and short positions in the market.
 - a. True
 - b. False

4. The open interest will increase when both the buyer and seller are initiating a new position and a new contract is started. The open interest does not change when the buyer initiates a new long position, and the seller is merely liquidating an existing long.
 - a. True
 - b. False

5. Many technical analysts use the volume histogram as a confirming indicator for trends and chart patterns.

a. True

b. False

6. Volume at price can be displayed as a histogram next to the Profile. The histogram will show us the extent of volume traded at each price level.

a. True

b. False

7. The greater the traded volume at a single price, the greater the acceptance of the price in the market.

a. True

b. False

8. Volume levels are usually consistent throughout the trading day.

a. True

b. False

-
9. When the market auction encounters buyers at a certain price level, it will move prices higher until there are no more buyers. In other words, the auction up will be halted at the price level where sellers are found in the market. When the auction encounters sellers, it will start to auction lower until it finds buyers.
- a. True
 - b. False
10. Market auction activity is usually taking place in the market at any given point in time.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.



VOLUME TRACKING INDICATOR

When it comes to understanding and analyzing market activity, there is no doubt that volume is a crucial variable. Volume is an independent and external variable to the market, yet at any given point in time, large buying or selling volume can enter the market and completely change the dynamics of market activity.

Consequently, it is vital for us to be able to study and understand the flow of volume throughout the trading day. I have conducted a number of different research studies on volume patterns and volume variations on a variety of instruments. Using my research findings, I designed and developed the Keppler Volume Tracking Indicator (KVT) to track different levels of volume in real time.

The KVT indicator is based on many of the same Market Profile concepts discussed in earlier chapters. As previously emphasized,

actual market data and market activity are our best source of information for trading decisions. Using a proprietary formula, the KVT was designed to look at the current traded volume at every price and highlight for us trading volume that would be considered above the usual or average levels.

This is accomplished by collecting historical volume data from a look-back period and examining current market volume levels relative to the historical volume data. The KVT, in real time, looks at the traded volume for each price as it accumulates and continually compares it to prior historical volume data. As soon as the volume exceeds the levels designated by the user, the indicator provides a visual marker to identify the presence of large volume.

There are a number of reasons that make it advantageous for us to identify the presence of high volume in the market. First, it helps us to identify trends, allowing us to see whether there is continued support for the trend. It also makes it possible for us to determine the level of commitment or conviction for the trend. Price levels that experience heavy trading volume are often important levels of support or resistance as well.

Moreover, the patterns and flow of large volume can often provide us with important clues about potential market direction.

KVT Parameters and Settings

The KVT has been designed to be simple and user friendly. The KVT can be used for any instrument that is traded on a central exchange and has the appropriate tick (bid /ask data) available. The KVT is currently available on both the MarketDelta and the Linnsoft Investor/RT platforms. The indicator is not designed or intended to offer or provide any buy or sell signals. It is designed to help traders and investors identify, track, and follow the flow of large volume in real time.

The indicator can be placed on a candlestick, bar, or Footprint chart. However, there are a number of additional benefits that can be gained by using the indicator on a Footprint chart. KVT can function for any selected period. Since our daily Market Profile charts are typically built based on a 30-minute period, we will use the 30-minute time frame for our example.

The indicator is available through the “Multiple Price Highlighter” feature in both Investor/RT and MarketDelta. Figure 9.1 displays for us the indicator setup window. There are a number of parameters and settings that need to be appropriately adjusted for each instrument.

Figure 9.1

KVT Indicator Setup Window

Add Indicator "Multiple Price Highlighter"

Multiple Price Highlighter
 News Marker
 Normalized Price
 On Balance Open Interest
 On Balance Volume
 Open Interest Analysis
 Oscillator/Summation
 Owl / Rectangle
 Paint Bars
 Parabolic SAR
 Percent Change Volume or Price
 Pivot Point
 Plug-in Indicator
 Point and Figure
 Position
 Price Bands
 PriceTime Cydes
 Profile
 QuoteBoard
 QuotePage Statistics
 Random Walk Index
 Rate of Change
 Rate of Change Summation
 Rectangle / Owl
 Reference Line
 Regression Acceleration
 Regression Forecast

Associated Instrument
 @ES# (AUTO:31:30m:FP)

Add Indicator to Pane
 1. @ES# (30m) (Footprint) 916 ba

Highlight Prices With: Keppler Volume Tracker

KVT Multipliers... I: 10 II: 20 Days: 50

Style: Solid Box (Custom)

Slices: 4 Offset: 1

Level I: [Color Picker]
 Level II: [Color Picker]

☐ Signal Action: Play Corkpop

New Edit

Presets Help Cancel Add Add+Close

Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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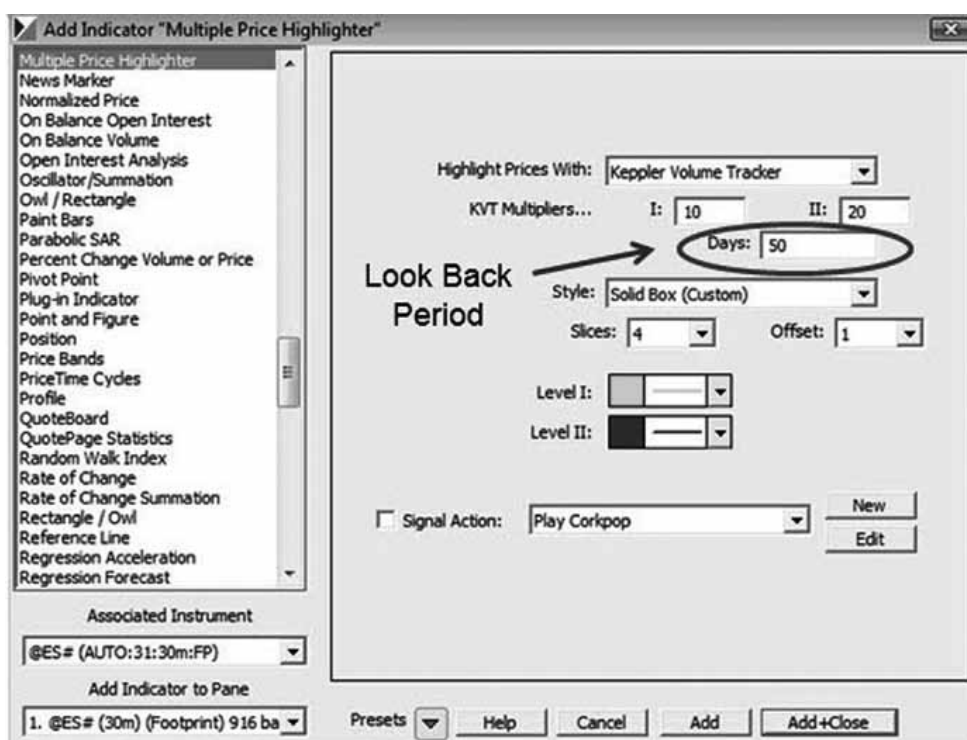
There are two types of settings for the indicator; those that will influence the calculations of the proprietary algorithm and those settings that will determine the display or visual features of the indicator.

In the upper portion of the setup window in Figure 9.2, there are three key user-defined variables: the look back number of days and the two KVT multipliers. These variables will influence the volume levels that will be identified and highlighted on the chart.

The volume levels will vary significantly from one instrument to the other. Consequently, the indicator offers the user the flexibility of adjusting the number of days for the look back period and the KVT multipliers.

**Figure
9.2**

Look Back Period Setting



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Look Back Period

The look back period setting can be adjusted to look back at as many as 250 days back for any given instrument. Naturally, it is essential to have the appropriate data available on the chart for the desired look back period. Looking back at very long periods is not always advantageous, since some of the past historical data may actually skew the numbers, thus making it difficult to identify high volume levels for current market conditions. Typically, it is not recommended to use a look back period that is longer than 50 days. Since volume levels vary from one day to the next as well as from one week to the next, it is also prudent to examine 5, 10, and 20 day periods. The results will vary from one instrument to the other and some experimentation is always necessary to determine the appropriate settings for each instrument.

KVT Multipliers

The indicator offers the user the ability to define two levels of high volume; this makes it possible to identify extreme levels when they do occur. The default settings for the multiplier are 10 and 20; if these settings do not produce results for an instrument, then a lower setting of 5 and 10 may be tried. If the indicator produces too many results with a setting of 10 and 20, then an adjustment to the upside may be appropriate. A setting of 15 and 30 may be used.

The flexibility in the settings makes it possible to adjust the indicator for different instruments.

Display Adjustments

Naturally, the visual displays can be adjusted to suit the preferences of each individual user. The recommended setting is to use the Cus-

tom Solid box setting and two different colors to distinguish between the two levels or degrees of heavy volume. It is often prudent to use a lighter and a darker color of the same shade to quickly distinguish between Level I and Level II of volume variations.

It is also possible to include an audible signal action to alert the user once Level I or Level II volume is present in the market.

KVT on a Footprint Chart

Since there are some inherent advantages to applying the KVT to a Footprint chart, in our example we will apply the KVT to a Footprint chart. We will also point out some of the advantages of using the KVT on a Footprint chart.

In Figure 9.3, we have applied the KVT to a 30-minute Footprint chart of the ES mini. The settings for the KVT were a look back period of 10 days and a multiplier of 10 for Level I and a multiplier of 20 for Level II of high volume.

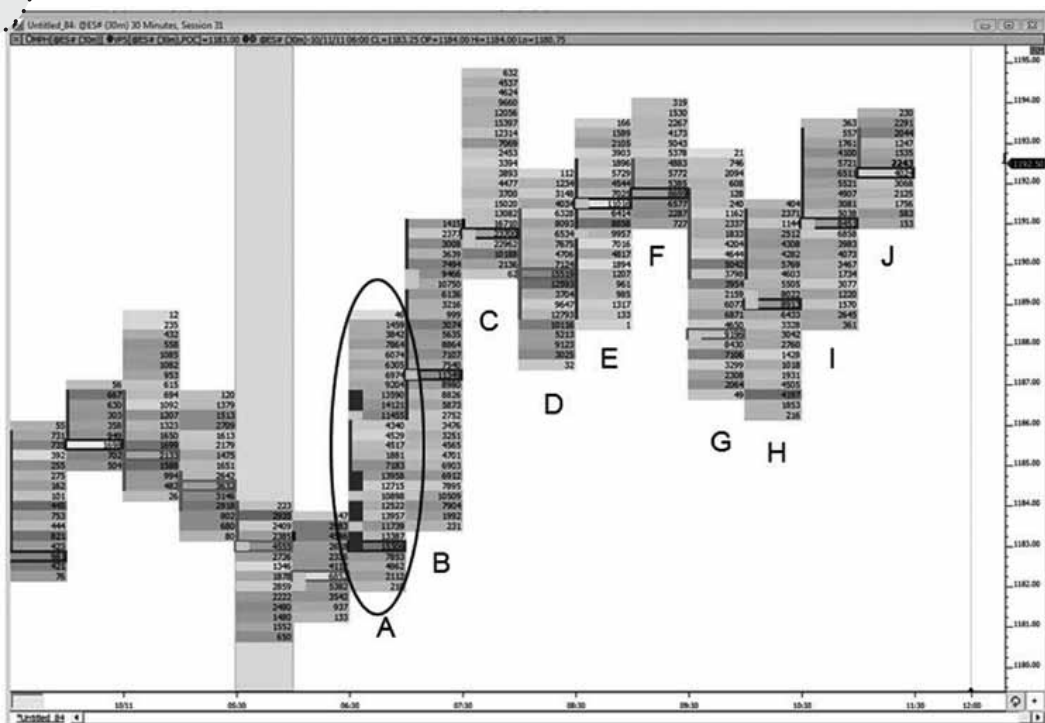
In Figure 9.3, you will immediately note that the greatest levels of traded volume occurred during the first 30-minute, or open period “A”.

In Figure 9.4, the dark squares on the left side of the Footprint chart highlight all of the Level II volume and the lighter squares indicate the prices where the Level I volume occurred.

One of the key benefits of using the Footprint chart is that it also allows us to see whether the Level I and Level II volume levels have a positive or negative delta.

**Figure
9.3**

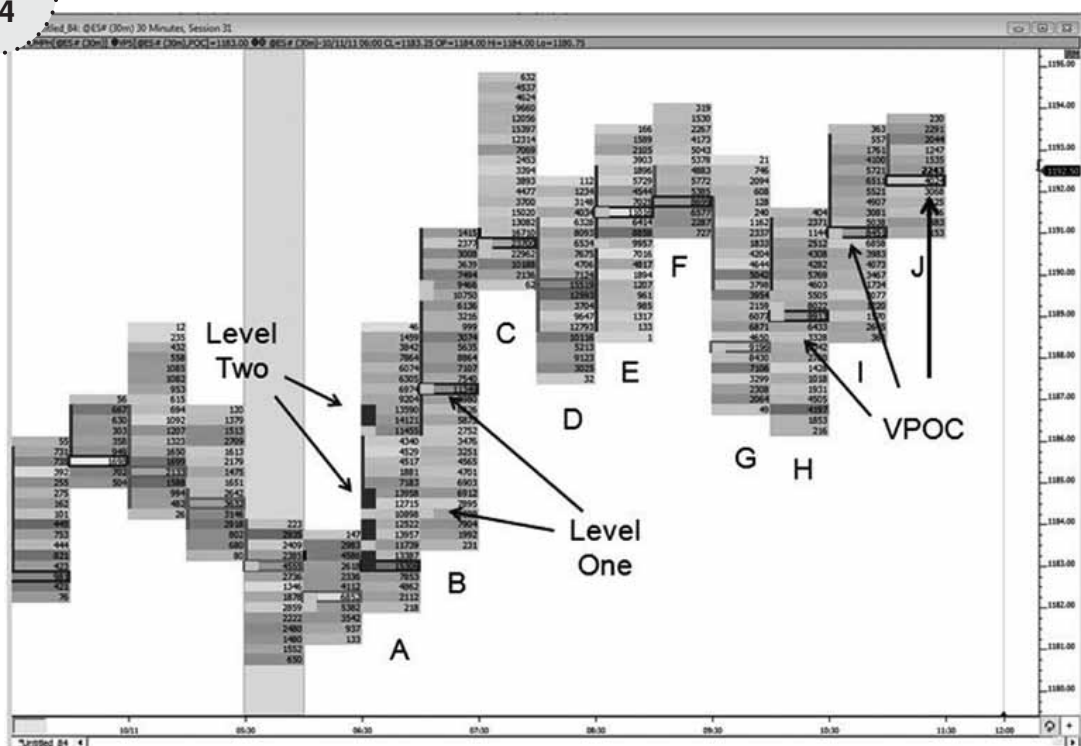
KVT on 30-minute ES mini Footprint Chart



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
For a closer look at this chart visit www.traderslibrary.com/TLEcorner

**Figure
9.4**

Comparing Level I and Level II Volume



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The delta as previously defined is the difference between volume that was traded at the ask and the volume that is traded at the bid. A positive delta indicates that more volume was traded at the ask, or in other words, more aggressive buying activity. On the other hand, if bid-traded volume exceeded the volume that was traded at the ask, this is usually associated with more aggressive selling in the market.

However, it is important to note that the delta alone is not always definitive in terms of identifying potential price direction. Sometimes there are price levels that experience heavy trading volume levels at the bid, resulting in a negative delta, yet prices continue to tick higher. In this case, even though there were in fact aggressive sellers that were willing to supply the market at the bid, there were also buyers that were even more aggressive and willing to exhaust the sellers' supply at that point in time.

Consequently, it is always wise to monitor the actual outcome of price movement and not to simply assume that a large traded volume with a negative delta will always result in a price drop.

In addition to the Level I and Level II volume levels that are included on the chart, we have also identified the volume points of control (VPOC) for each Footprint bar. Frequently, the KVT will also highlight the VPOC as a Level I or Level II high volume as is the case with bars A, B, C, E, G, H and I in Figure 9.3.

The delta and the gradient coloring are not the only advantages that the Footprint provides for us. It also helps us to see, compare, and monitor the numeric values for the volume at each price level.

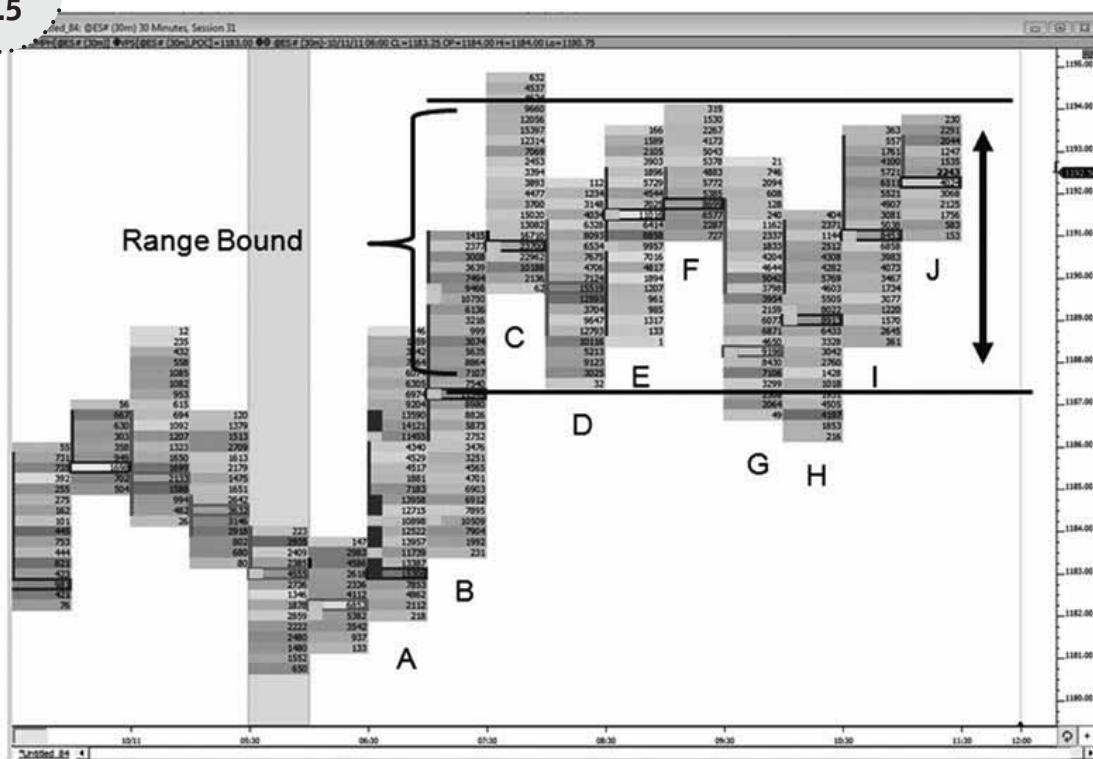
Interpreting the Data

Reading and interpreting the flow and patterns of volume requires some observation and practice. The first thing that we want to examine in looking at volume flow is the direction of the volume flow, or in other words, more volume coming into the market as prices rise or as prices drop. We need to analyze how prices are reacting to the heavy volume coming into the market.

In Figure 9.4, we can observe that during period A the Level I and Level II readings are stacked above one another, indicating a bullish bias. In addition, we can also observe that the KVT-identified volume increases are all above the VPOC for period A. The VPOC is identified by the hollow box in the lower portion of the bar. We will also note that as prices dropped lower in period B, the KVT-

Figure 9.5

Range Bound Market



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identified Level I volume entering the market and pushing prices back to the upside.

The VPOC for period B also moved higher towards the mid portion of bar B and higher than the VPOC of bar A. Once again, we will observe that Level I volume supported prices as they dropped in period C. At the top of period C, we will observe that volume seemed to dry up. As a result, prices dropped in period D. However, the KVT did not identify any Level I or Level II volume entering the market to push prices lower.

There was no directional conviction in the market. As a result, prices continued to move within a range for most of the day. Periods D, E, F, G, H, J, and I all remained range bound, as can be seen in Figure 9.5.

Sustained volume is essential for any directional market move. Tracking and following the volume in addition to monitoring the day's activity on the Profile provides us with valuable insights about the type of trading day that is developing and helps us in making better-informed trading decisions. That is the primary purpose for the KVT indicator.

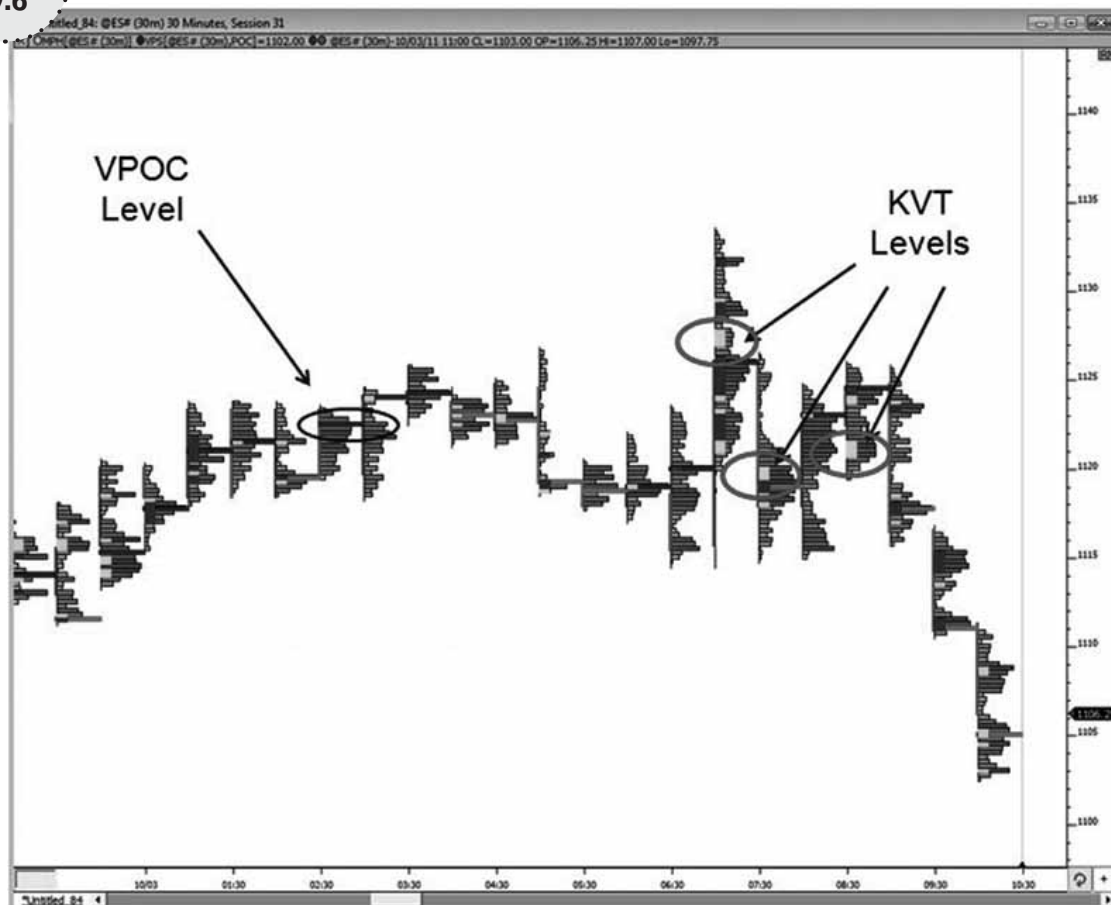
Volume Profiles

The KVT can also be displayed on volume Profile charts. Volume Profile charts display a Profile for each time period showing the distribution of volume during that period. The volume Profile distribution helps us to identify where the bulk of activity is occurring in the bar and where the increased volume levels occur in the distribution.

In Figure 9.6, the KVT indicator has been applied to a 30-minute volume Profile. The location of Level I and Level II markers on each bar help in understanding whether the increased volume had a bullish or bearish effect. If we observe that the Level I or II activity occurred at the lower end of the range and the range extended higher, it is clear that the increased volume produced a bullish effect. However, we

**Figure
9.6**

KVT on Voume Profile Chart

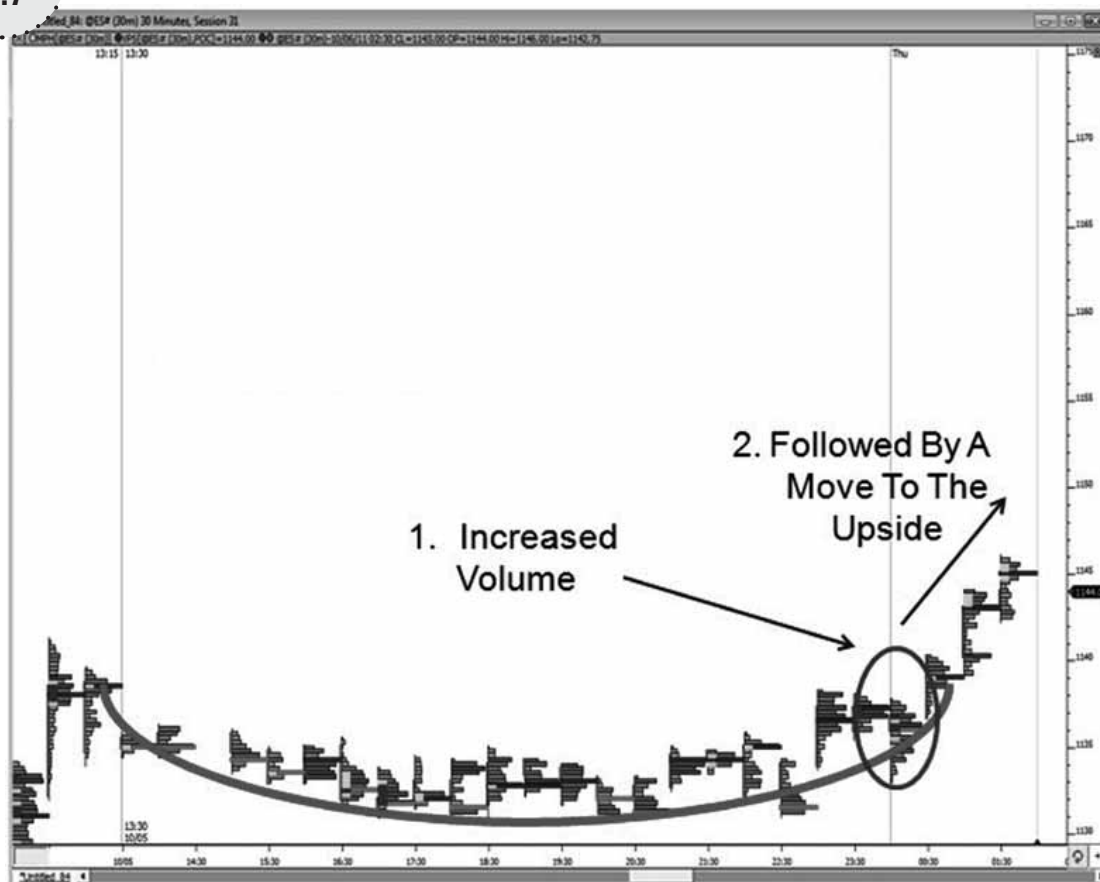


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are unable to determine the extent of the effect until we observe the activity of the following bar. If in fact the following bar continues higher and experiences additional increases in bullish volume, this may signal the beginning of a trend. If on the other hand, prices drop and revisit the lows of the prior bar, the apparent bullish trend may lack in conviction, unless of course additional Level I or Level II volume steps in to lift prices higher. Volume tracking requires patience and careful analysis. A rush to judgment can often lead to wrong conclusions.

**Figure
9.7**

Big Smile Pattern



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Volume Patterns

There are a number of different volume patterns that frequently occur in the market. Once these patterns are learned and identified, they can often offer some lucrative trading opportunities. One such pattern can be observed in Figure 9.7. It is what we describe as the “Big Smile” pattern. This bullish pattern usually develops over a period, often occurring following the overnight session. The market moves slightly to the upside on light volume during the overnight

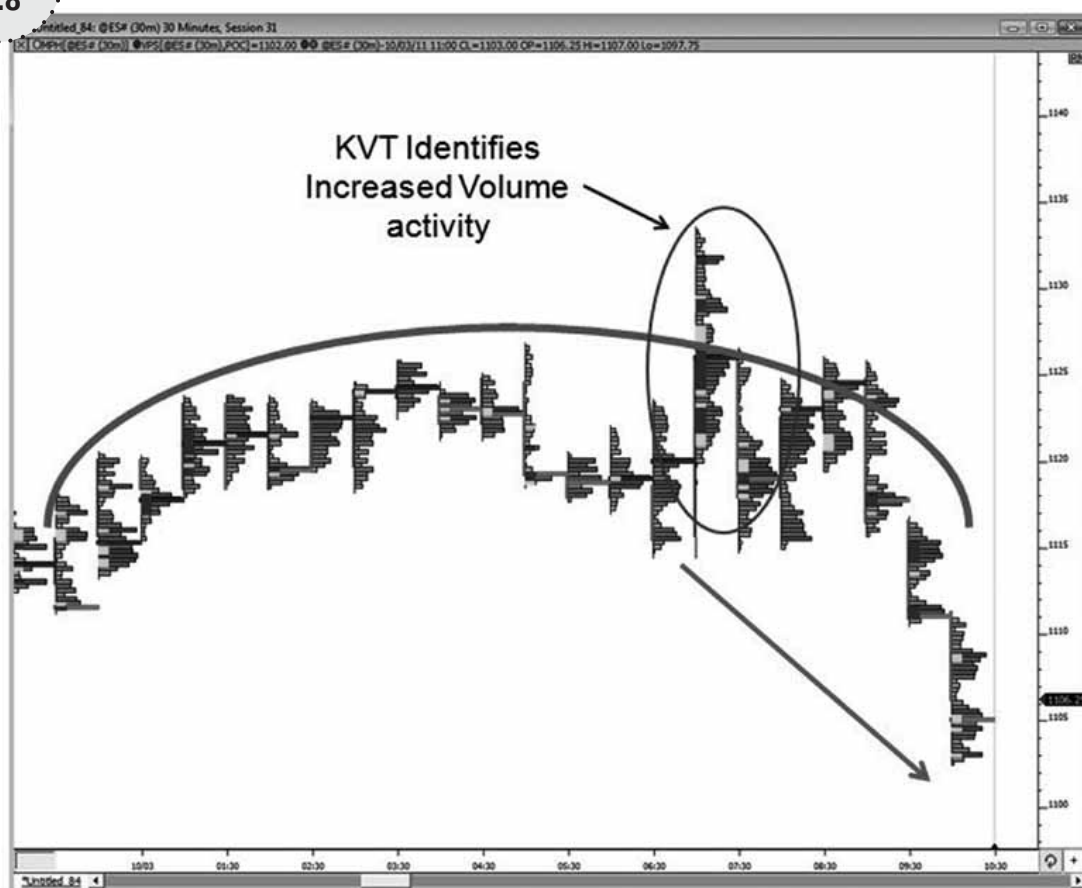
session. At the open of the new session, the market experiences a surge in volume activity.

This increased activity moves prices higher and a bullish move follows the smile, as can be observed in Figure 9.7.

Another common pattern, the “Frown,” produces the opposite effect of the “Big Smile”. In this case, the market moves on light volume for a period of time. Once volume comes into the market, the directional move to the downside begins to take effect. It is important to be patient when increased volume activity occurs; sometimes volatility

**Figure
9.8**

Frown Pattern



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increases and prices may spike in a direction away from the actual upcoming trend.

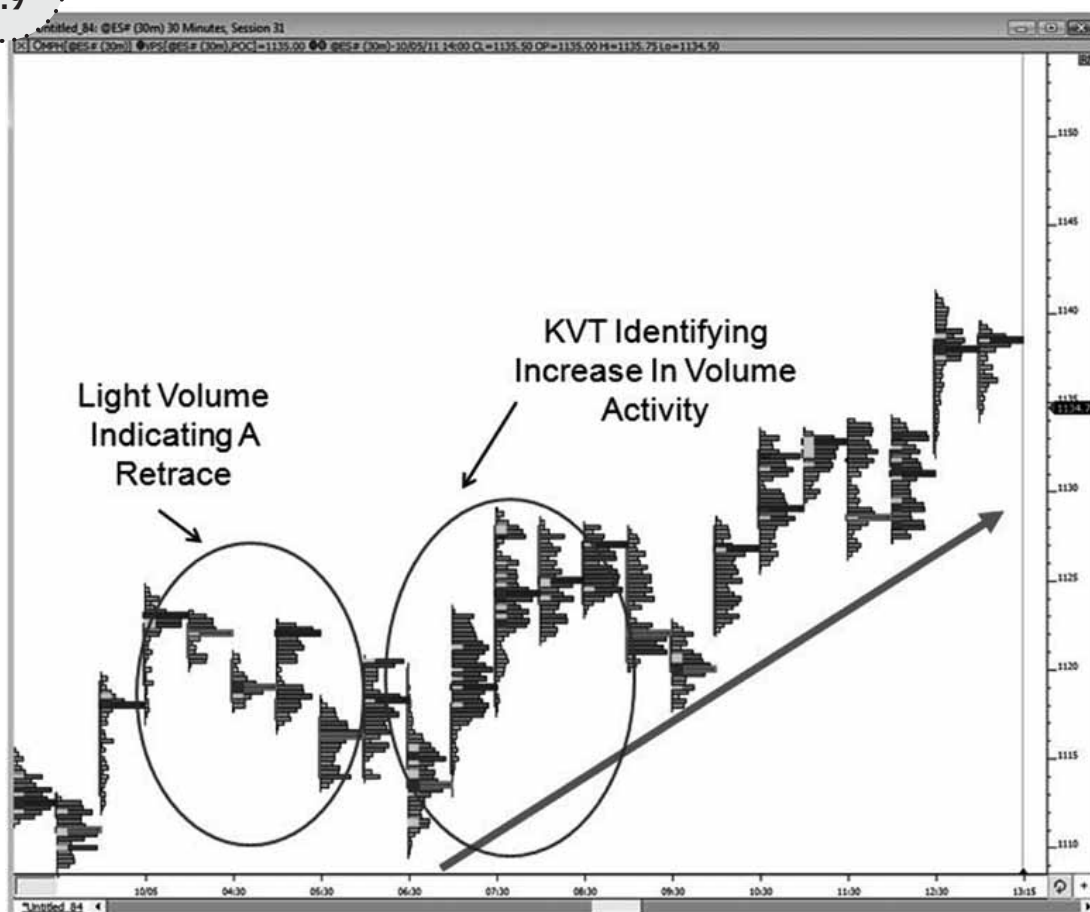
However, once the dust settles and the volatility subsides, the direction becomes evident, as can be seen in Figure 9.8.

Trending Volume

The flow of increased volume makes it possible to quickly and easily identify directional moves or trends. In Figure 9.9, the KVT identi-

Figure 9.9

Volume in the Direction of the Trend



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fies the frequent occurrence of Level I and Level II volume in each of the bars that are moving in the direction of the up trend. This confirms the commitment of the buyers to the move. We can also observe that during each of the retraces in the trend the occurrence of Level I and Level II volume is significantly reduced. As a matter of fact, the increased volume appears at the support levels, moving prices back in the direction of the trend.

This distinction in volume patterns helps us to distinguish between moves that are merely a retrace in a directional trend and actual reversals that change the direction of the trend. A reversal will only occur when it is accompanied by significant increases in volume levels at resistance.

In addition to a number of different and distinct volume patterns, the KVT indicator also provides valuable data on the behavior of volume at support and resistance levels. It offers us an opportunity to identify when and where major activity takes place in real time. It shows us where the market is facilitating trade and how the forces of supply and demand are interacting.

Chapter Nine Quiz

1. Volume is an independent and external variable to the market; at any given point in time, large buying volume or large selling volume can enter the market and completely change the dynamics of market activity.
 - a. True
 - b. False

2. Increased volume activity at a given price level merely indicates that many sellers and buyers are actively trading at that price and does not necessarily point to buying or selling activity.
 - a. True
 - b. False

3. The Keppler Volume Tracking indicator (KVT) is not intended to offer any buy or sell signals. It is designed to help in identifying increased levels of activity in the market.
 - a. True
 - b. False

-
4. The look back period that is selected by the user for the KVT indicator will influence the location and frequency of Level I and Level II volume activity on the chart.
 - a. True
 - b. False
 5. If we observe increased volume activity with a positive delta, that always indicates that there is a bullish sentiment in the market and prices will continue to rise.
 - a. True
 - b. False
 6. The KVT indicator will only function properly on time-based charts.
 - a. True
 - b. False
 7. It is both prudent and wise for any trader or investor to make their trading decisions based on a confluence of findings rather than relying on any single indicator.
 - a. True
 - b. False

-
8. The Volume Point of Control (VPOC) is the price level where the greatest volume of trading occurred during a specified period.
- a. True
 - b. False
9. Any trending directional price move for an instrument requires a flow of volume in the direction of the move to sustain the move.
- a. True
 - b. False
10. The KVT indicator uses two measures or levels of increased volume to allow the user the ability to distinguish and identify the extent of the size of volume increase that is taking place.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

10

DESIGNING PROFILE-BASED STRATEGIES

Importance of Strategy

As traders and investors gain and develop a greater understanding of the Profile and auction market concepts, they must prepare themselves for implementing and utilizing these powerful concepts in their trading. Consequently, traders need to learn how to design, develop, and test Profile-based trading strategies. Since our ultimate goal is to profit through our knowledge and understanding of the Profile, designing and building a profitable trading strategy becomes a critical element for success.

Generally speaking, a strategy is a crucial element for any meaningful enterprise. A clearly defined strategy is essential for anyone who wishes to accomplish a goal. Whether you are planning a business venture, constructing a building, planting a crop, or invading another country, your strategy and tactics will ultimately determine the

success or failure of your enterprise. In much the same way, a trading strategy and the ability to execute it will ultimately determine the success or failure of a trader or investor.

Trading can be an extremely emotional experience, especially day-trading. Daytraders have to quickly and continuously make critical decisions within very short time frames. These decisions can result in losses or wins. In either case, the emotions of fear and greed are powerful and can easily influence a trader's psychology.

Following a strategy helps a trader to keep their emotions out of the trading decision-making process. Every trader, at some point during their trading journey, has had to struggle with the psychological challenges that are inherent to the process.

Many a trader has moved their stop loss wider hoping and praying that the market will turn, only to be hit with greater levels of loss. Other traders have succumbed to the fear of losing, taking themselves out of a winning trade for a tiny profit, only to watch the market rocket higher.

A strategy helps to control a trader's emotions and defines the path or plan that must be followed and the actions that must be taken to accomplish the desired goals. A strategy does not have to be complex or sophisticated. As matter of fact, often, the simplest of strategies produce the best results. Moreover, simple strategies are usually the easiest communicate, follow, understand, and implement.

Consequently, it is important to understand that a strategy is nothing more than a carefully prepared plan or method to accomplish a desired goal or objective. While it may be simple in its conception, it does require deliberate thinking or meticulous planning; it must be based on accurate knowledge, and most important of all, it will require skills and careful analysis. We must also point out that not all strategies will lead to the desired goals. Consequently, strategies have to be tested, evaluated, revised, and adjusted.

It is also important to understand that simply having a strategy does not necessarily always guarantee success; however, the absence of one almost certainly leads to failure.

**Having a strategy does not
guarantee success, but the absence of one
almost certainly leads to failure.**

While there is no single trading strategy that will always guarantee success in the market, there are many that have a high probability of success. There are numerous ingredients that one can identify as components of a successful trading strategy. In this chapter, we are going to focus our discussion on seven key elements that must be included as part of your Profile-based trading strategy. We will discuss and examine each of these elements and highlight the reasons for their importance.

Strategic Alignment

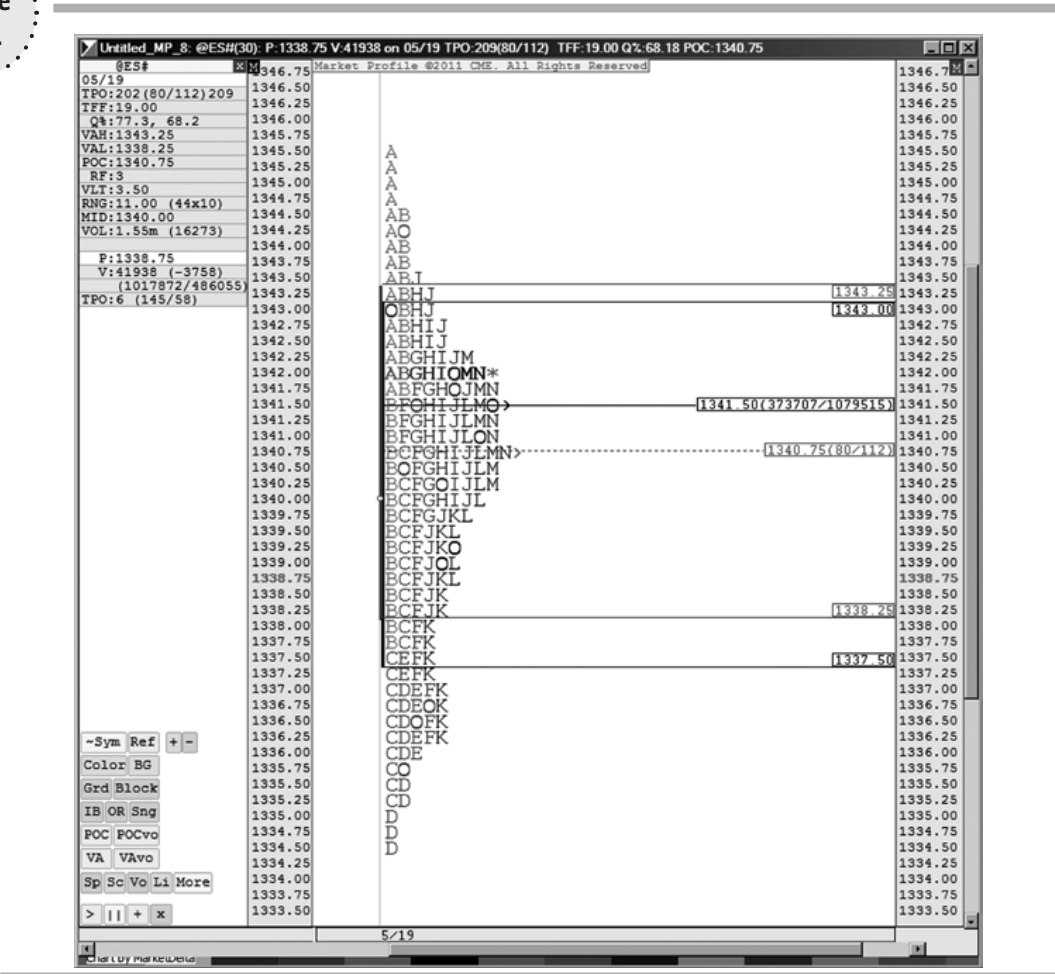
In studying the Profile, we have certainly learned that the market is constantly changing. Furthermore, in studying the auction process, we understand that the market conditions will vary significantly from one time frame to another. There are many concurrent auctions that are simultaneously taking place at the same point in time. An intraday trader may be buying in the half-hour auction, while the weekly trader may be selling based on a weekly auction. There are many different perspectives and perceptions of the market that are interacting at any given moment of time.

Often, daytraders attempting to apply Profile concepts will follow a basic strategy to simply sell once prices rise above the day's value area highs or buy when prices drop below the day's value area lows.

This strategy may work well during a non-trending or a neutral day, as observed in Figure 10.1 where the market is rotating or distributing around a fair price. If the market was sold at period I or J as it approached the value area high of 1343, the market returned back to fair value at 1340.75. Similarly, if the market was bought below the value area low of 1337.50 during periods D, E, F, and K, it eventually returned to fair value at 1340.75. In both of these cases the resulting trades would be profitable. The strategy worked because it was in alignment with the market condition.

**Figure
10.1**

Fair Price Rotation on Non-Trending Market Day



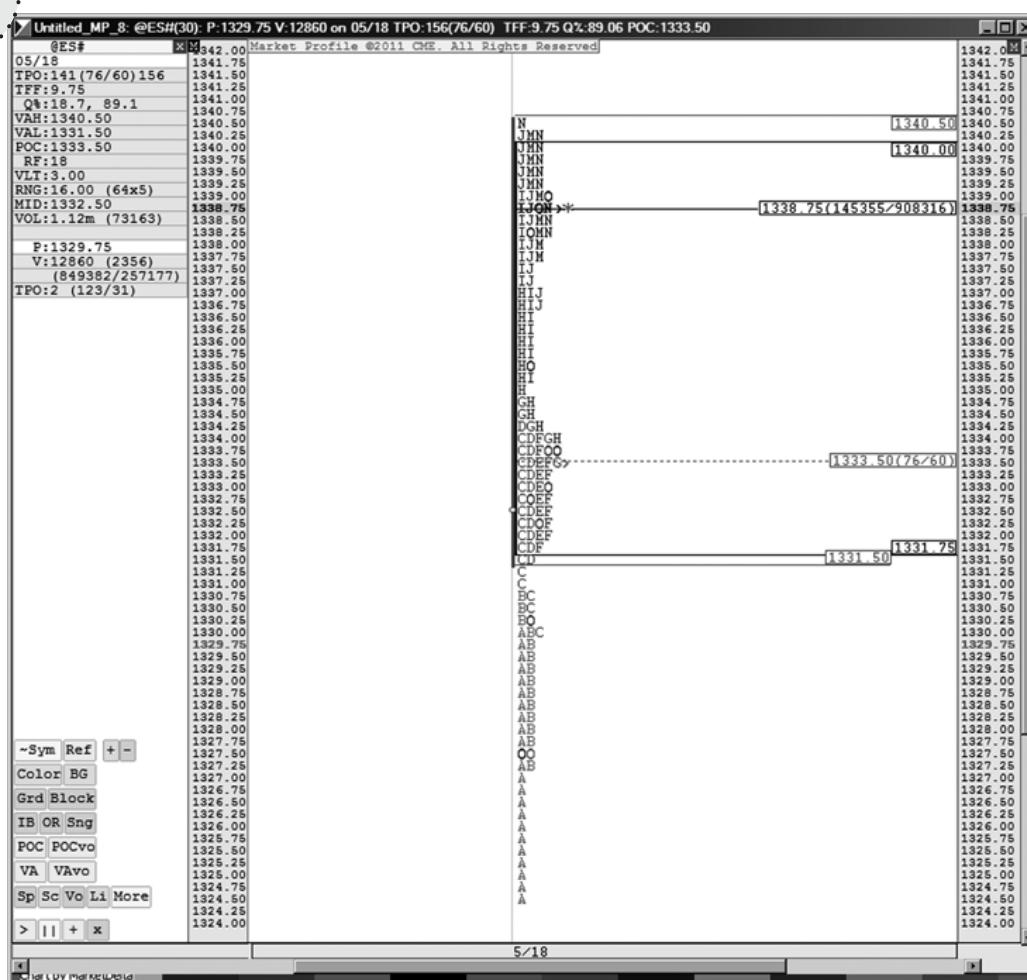
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When it comes to trading, there is never a “one size fits all” strategy. This same strategy would certainly not work in a market that is imbalanced or moving directionally as observed in Figure 10.2.

If an imbalanced market is moving higher and a daytrader sells at a value area high, they are immediately on the wrong side of the market. As the market breaks out of value and continues to move higher, the value area is expanding and the market is rejecting the

**Figure
10.2**

Imbalanced Market Moving Directionally



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previous area of value. No one ever wants to be on the wrong side of the market on a trending day.

Consequently, selling value area highs and buying value area lows as a strategy is only profitable in the right market conditions within the appropriate time frame.

Determining and identifying market conditions is not always easy, but it is essential for selecting and using the appropriate trading strategy. A trader must first earn their “MD” before they can effectively apply their trading strategies. They must learn to become a “Market Doctor”; they must first learn to evaluate the market condition in the same way that a medical doctor is able to evaluate a patient’s condition. Just as a medical doctor begins by looking the overall health, history, age, weight, and psychological condition of a patient, a market doctor must also begin by taking a holistic approach to the market. They must take a look at the overall context of the market, identify whether there is a major trend in the market, examine the shape of the monthly composite Profile and the weekly composite Profile, examine volume levels in the market, and identify key reference price levels for the market.

Once they gain a perspective into the overall health of the market, they can begin to focus on a diagnosis and the proper treatment or strategy for the market condition in the time frame that they wish to trade. If the diagnoses and treatment are appropriate for the market condition, they will be rewarded handsomely.

Strategic Confluence

The term confluence is often used in geography to describe the point where two or more bodies of water merge and meet. In trading, “strategic confluence” is the process of identifying and selecting a number of different factors that need to come together to support the potential for a profitable trade.

A profitable trading strategy relies on the proper strategic confluence, the process of integrating a number of different elements or observations to support the strategy. The strategy should never rely on a single factor or observation for its success or failure. The process of assembling, integrating, and correlating several pieces of information into the strategy is known as strategic confluence.

There are numerous sources for data and information at any given point in time. The key is to distill the data and select the parts of the information that are relevant and meaningful to the strategy. If I am planning a breakout strategy, I would like to see that price has moved above the resistance level. However, the fact that price has pierced through resistance alone is not adequate to support a trade entry into the market. However, if the price breakout is supported by an increase in volume, aggressive buying at the ask, and a bullish intermediate trend, there is a confluence of elements to support a long trade entry.

The confluence needs to come from different sources of information. We cannot rely on different observations about the same variable for valid confluence. The fact that price is moving higher and that price has broken through resistance does not provide us with confluence. Since both of these facts are related to the price movement higher, there is no confluence. However, once we bring volume activity and the momentum of a trend into the picture, we gain the confluence that we seek to support our strategic decision for a long entry.

In the legal system, they require what is described as a preponderance of evidence to support the success of the legal argument in a case. In the trading world, we require a confluence of elements to support a successful trading strategy.

Strategic Goals and Targets

In continuing with our medical analogy, when a medical doctor prescribes a treatment, there is always a goal and purpose for this treatment. Once again, in this same manner, when a market doctor executes a trading strategy, they must have a goal and a profit target.

There are many possible goals that can be included as part of a trading strategy. There are single profit targets, multiple profit targets, and adjustable profit targets. A single profit target simply involves identifying a single specific price level for profit taking in the trade. A single profit target price level may be determined based on support and resistance levels, key reference lines, or the range of price movement.

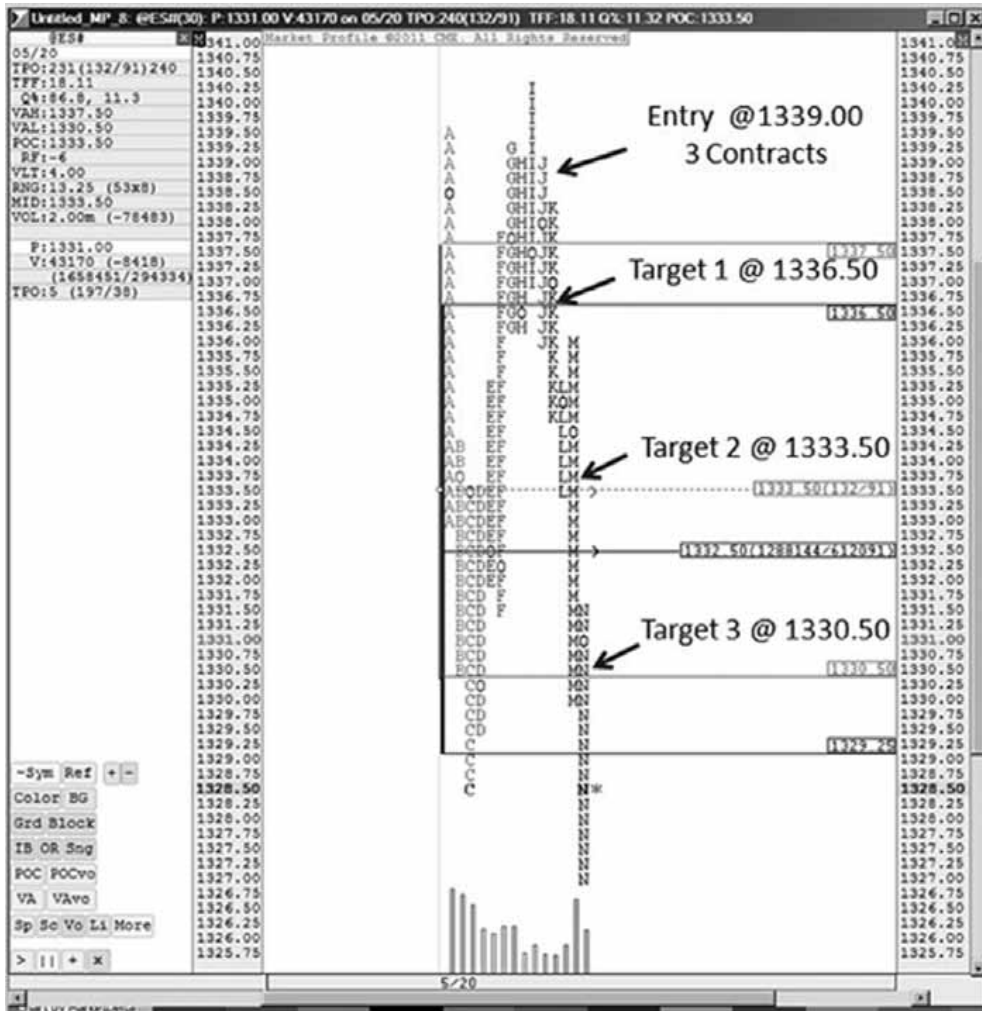
Once the predetermined profit target price level is reached, the open position is filled and the trade is completed. Filling of the open position at the target price concludes the trade and marks the end of the strategy. Many traders like to use a single profit target as part of their trading strategy; it provides a clear goal and allows them to immediately exit the market when the target is reached and their position is filled.

However, other traders feel that with a single profit target, they limit their profit potential. They would like to be in a position to let the winners run and maximize their gains. Also, a long-term analysis of the market may lead them to expect a large market move with several critical targets. Therefore, they prefer a multiple profit target approach to a single profit target approach. Naturally, the multiple profit target approach requires an initial position that includes multiple units or lots of the instrument that will be traded.

For example, in Figure 10.3, if a trade is initiated for a sell position with three contracts of the ES-mini at a price of 1339, then the first profit target selected would be 1336.50, the volume value area high, followed by a second profit target at 1333.50, the POC, and a third profit target at 1330.50, the volume value area low.

Three Profit Targets Met

Figure
10.3



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
For a closer look at this chart visit www.traderslibrary.com/TLEcorner

As each target is reached, the strategy closes one of the contracts and adjusts the stop loss to a price level close to the target level that is reached. Once the first target is reached and the stop loss is moved to a new level, the trade is then always in a profitable position for the two remaining open contracts.

At this point, even if the position is stopped out, the trade would still be profitable. However, as the market continued to move lower, the profit potential continues to increase.

Some traders prefer an adjustable target approach. In this approach, the trader continues to actively monitor the development of the trade. They may use a single unit or multiple units of an instrument in initiating a position. This approach requires an extremely high level of skill and discipline on the part of the trader. Frequently, many traders become vulnerable to their emotions in the decision-making process and are unable to properly manage the trade or to attain the maximum profit as desired. This approach is certainly not recommended for beginners.

Risk and Money Management

Risk and money management are essential ingredients of any successful trading strategy. Capital is every trader's lifeline in the market; without capital, there is no life in the market. Every trader must learn to guard their precious capital resources and to always keep losses to a minimum. When it comes to trading, capital is king and capital preservation or risk management is the royal guard. Success in trading often comes from the ability to minimize and contain losses. Money management is a critical aspect of investing, trading, or any financial activity. Money management techniques must be an integral part of any successful trading strategy. Every investor or trader must understand and accept the fact that losses are a natural part of the process. Nevertheless, the key to long-term success is the ability to minimize and control losses. There is a traditional British proverb that states, "Take care of the pence and the pounds will take care of themselves." In this same way, for traders, we can comfortably proclaim that if you take care of the losses, the profits will take care of themselves.

Capital is every trader's lifeline..

Without capital, there is no life in the market.

There are a number of different ways to manage risk and money. It is a question of personal choices; different individuals will have different risk tolerance levels, different goals, and different levels of capital. A profitable trading strategy must address all of these considerations and be designed to accommodate the specific circumstances and risk tolerance for each individual.

When it comes to risk and money management, there are two basic and general guidelines that apply to everyone:

1. No one should ever risk money that they cannot afford to lose.
2. No one should ever put all or even a large part of their available capital at risk in any one single trade or transaction.

In developing a risk management plan, a trader must carefully determine the amount of money they can afford to risk or lose on any single trade, the tolerance amount for a single day, and the tolerance amount for a single week. Moreover, the trader must set limits for their maximum drawdown on any trade. A drawdown is the largest amount or greatest dollar drop that is acceptable on a trade. Sometimes, this may not necessarily be a loss; it may be a drawdown from a peak profit level.

Identifying these critical tolerance amounts influences the selection of which instruments to trade, designing the strategies that are appropriate for their risk Profile, determining position size, and establishing risk-to-reward parameters.

Many traders often rely simply on a stop loss as the risk management tool. While a stop loss is always prudent and important as part of any trade strategy, it should never be the sole focus of the risk and money management process.

The placement and location of a stop loss in any strategy is critical to the success or failure of the strategy. Some traders arbitrarily select a dollar amount as the amount that they are willing to accept as a loss on a trade. This often results in frequent losses or a very poor win to loss ratio. A stop should always be selected as the failure point for the strategy. It is the point on the chart that tells us the trade is no longer valid as a potential profitable trade; it is time to leave and exit the trade. The stop loss is the point where the trader had determined that the trade is simply not working as planned or expected. In the process of developing or designing a strategy, the strategist must identify a point or price level for failure; a point that, if reached by the market, signals that the odds for a profitable trade are no longer in favor of the trade.

Many traders are often frustrated when the market takes out their stops, only to reverse and then proceed to move in the direction of the original trade. This may be the result of an ill-timed entry or a poor selection of a price level for the entry. It does not necessarily always mean that a greater or a wider stop was required for the strategy.

In developing a strategy, it is important to identify the appropriate entry and to carefully weigh the risk to reward ratio for the strategy. It does not make any sense to risk \$100 to only make \$10.00. A reasonable risk to reward ratio for a strategy should be at minimum a 1:2 ratio. Meaning, that for every dollar risked there is a potential gain of two dollars. The risk to reward should also always be evaluated in the context of the probability of success for the strategy. If the average success rate for the strategy is low, then the profit ratio must be high enough to compensate for all of the potential failures.

In other words, you need to be aware that if you have a fifty percent probability of success with a 1:2 ratio, every winning trade will have to pay for two potential losers. Naturally, the higher the risk to reward ratio and the higher the probability of success, the better the strategy.

Try Before You Buy

Once a trading strategy is developed, it is not complete until it is tested and validated under actual market conditions. The testing process should never be done with actual money. It must be done in real time using a simulator or a demo account.

Unfortunately, many traders do not spend enough time testing or practicing and documenting the results for their trading strategies. In an eagerness to make money, traders will frequently plunge into the live market with strategies that they have read or watched on an online video without adequately testing and evaluating the strategy for themselves.

**Always test a new strategy in
real time using a simulator or a demo account
before using it with actual money.**

The real live market is an extremely expensive place to attempt to practice or to learn. The market has no mercy or patience for beginners or poorly funded traders. As a matter of fact, these are usually the first traders to be eliminated from the arena. The live financial markets are no place for the uneducated or ill-prepared trader to venture.

The financial markets are probably more difficult to trade today than they have ever been in the past, and that is not to say that they were easy in the past. It is simply to highlight that the markets today involve humans trading in tandem with some of the most sophisticated algorithms known to man. These machine-driven algorithms are able to examine, analyze, and process incredible amounts of market data within nano-seconds of time. Even the most intelligent of human minds simply cannot and do not function as efficiently or as rapidly as these machines.

As a result, before actual implementation of any trading strategy in the market, a trader must test, practice, and evaluate the proposed strategy in advance. The process of testing a strategy is not simply about executing a number of trades on a simulator. To effectively test and evaluate a strategy, the proper data and documentation must be generated for the strategy.

First, I have found it extremely helpful to designate a three-ring binder for each strategy to be tested. The binder will be the tool that will help to contain the data and documentation for the testing phase of any strategy. At the beginning of the binder, there should be a clear and detailed explanation of the logic, the rules, and the guidelines for the strategy.

It may also be useful to include a chart image showing the appropriate conditions for the strategy. Every time the strategy is tested, the binder must include an image of the chart at the point of entry and images for the exit or exits.

Once the simulated test is completed, a brief report should be generated describing whether the strategy worked or not and the reasons for failure or success. The more tests that are performed using the strategy, the more reliable the data collected becomes.

A few tests are never adequate in generating meaningful statistics about the probability of success. If the strategy is successful three out of five tests, this is not an adequate testing sample for us to conclude that the strategy has a three out of five probability of success.

The process of testing requires many iterations. Every time a test is conducted, a trader has an opportunity to further improve and enhance the strategy. The strategy testing and evaluation process will definitely require both time and patience, however, it is well worth the investment of both.

Strategic Tools

Over the past two decades, advances in technology have had an increasingly significant impact on financial markets and trading practices. Some market strategies completely rely on technology for their success. High frequency trading cannot be accomplished without access to the right tools and the right technology.

As an individual trader, it is important to stay abreast of the latest technological developments in trading execution platforms, charting software, and analytical tools. Even though Market Profile charts have been available for about two decades, there are still many platforms that do not include them.

Naturally, a trader cannot use Profile strategies or analytical concepts without the appropriate tools. In addition to the analytical capabilities, a trader must also seek accurate and reliable market data as well rapid and easy execution.

The tools used by a trader will affect strategy performance. If a platform does not provide easy and rapid execution of trades, this will hamper the filling of entries, targets, and exits. If a strategy requires a limit price for the entry and a trader decides to place a market order or chase prices in order to fill, this can be devastating to the success of a strategy.

Execution is an important aspect of any strategy. Frequently, execution problems may not be apparent during the simulator or demo phase of testing. Consequently, the first time a strategy is used in a live market, the position size must always be kept to a minimum.

A trader should always evaluate different execution tools and options to ensure that they are using the best possible tools available to them. Using the appropriate tools is an integral part of employing a successful trading strategy, and the selection of the right broker and the appropriate trading platform are important tools for a successful strategy.

Strategic Compatibility

There are as many different trading styles as there are personalities. Not all trading strategies are suitable for all traders. Some traders prefer to completely automate their trading decisions and strategies, others prefer to continually monitor their trades and actively manage their trading strategies.

Some traders are impatient and like to have lots of interaction with the market. They may place several trades during the course of single day. Yet others prefer a more patient and selective style for their trade selection. They may only choose to trade once or twice each week.

In my experience as a trading educator, I have found that some strategies will produce outstanding results for some traders and dismal results for others. The problem usually lies in an improper match between the strategy and the trader's personal skill and style. The strategy was simply not suitable for that individual.

It is important for each individual trader to design, develop, and select trading strategies that are compatible with their own individual personality traits and trading style preferences. A strategy needs to be custom tailored to individual personality in the same way that a strategy needs to be in harmony with each individual's risk tolerance.

Chapter Ten Quiz

1. Strategic alignment in a trading strategy is the process of selecting the trading instrument and time frame.
 - a. True
 - b. False

2. The strategy of selling above a Profile's value high and buying below the value low will always yield some profit.
 - a. True
 - b. False

3. The process of integrating a number of different elements or observations to support a trading strategy is described by technical analysts as an eclectic composite.
 - a. True
 - b. False

4. Strategic confluence needs to be derived from different sources of information. We cannot rely on different observations about the same variable to generate a valid confluence.
 - a. True
 - b. False

5. A profit target should always be left to the market conditions for maximum gains.

a. True

b. False

6. Automated strategies are primarily used for speed of execution and better fills.

a. True

b. False

7. In addition to profitability, success in trading is often a product of the ability to minimize and contain losses.

a. True

b. False

8. In developing a trading strategy, it is important to identify the appropriate entry and to carefully weigh the risk-to-reward ratio for the strategy.

a. True

b. False

-
9. Trading platforms are not critical to a trading strategy because advances in technology have made all platforms the same.
- a. True
 - b. False
10. Once a trading strategy has been validated, tested, and proven, any trader or investor can easily implement it.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

11

PROFILES AND STOCKS

The city of Chicago was the birthplace of the Market Profile and there is no doubt that there is a direct association between the Profile and the Chicago Board of Trade. The Chicago exchange is well known as the central exchange for commodities. This association has led many investors and traders to view the Profile as an analytical tool that is only useful for commodities. As a result, many equity traders and investors have been skeptical about the utility of the Profile in the equities market and have not been interested in learning about the Profile. They have simply thrown out the baby with the bath water.

The Profile is an incredibly beneficial and powerful analytical tool for trading stocks as well as other equity instruments. Market Profile concepts can be applied to any financial instrument traded on any electronic exchange. In this chapter, we will examine how the Profile structure can be useful in analyzing market condition and sentiment

for a stock. In addition, we will briefly explore how we can integrate findings from the traditional technical analysis process with Profile structures.

I hope that this will open the door for equity traders to discover the analytical power of the Profile and learn some new approaches to profit with the Profile.

Apple Stock

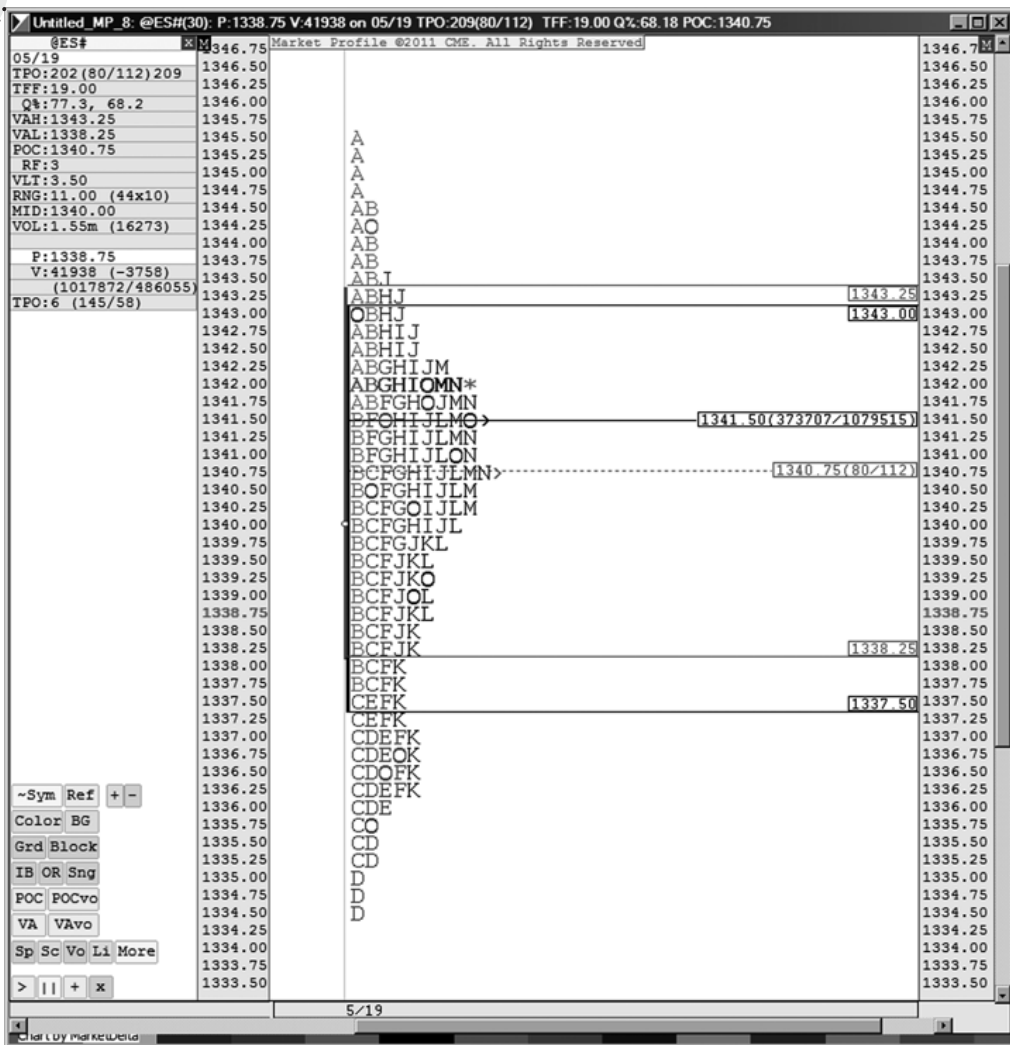
Over the past decade, one of the most active and popular stocks on the NASDAQ has been Apple computers (ticker symbol AAPL). Apple Inc., formerly known as Apple Computer, Inc., was founded in 1976 and is headquartered in Cupertino, California. It designs, manufactures, and markets personal computers, mobile communication and media devices, and portable digital music players. In addition, Apple sells software products, services, peripherals, networking solutions, and third-party digital content and applications worldwide.

The company sells its products worldwide through its online stores, retail stores, direct sales force, third-party wholesalers, resellers, and value-added resellers. The company sells its products to consumer, small and mid-sized business, education, enterprise, government, and creative markets. As of September 25, 2010, Apple has over 300 retail stores, approximately 233 in the United States and 84 internationally. Its estimated market capitalization is at about 307 billion dollars. The company has been known for its innovation and loyal customer base.

In 2011, Apple's daily trading volume ranged anywhere from 7 to 41 million shares per day. The Profile can be extremely helpful in studying and analyzing Apple's activity.

Figure 11.1

Apple Daily Profile Chart May 25, 2011



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For a closer look at this chart visit www.traderslibrary.com/TLEcorner

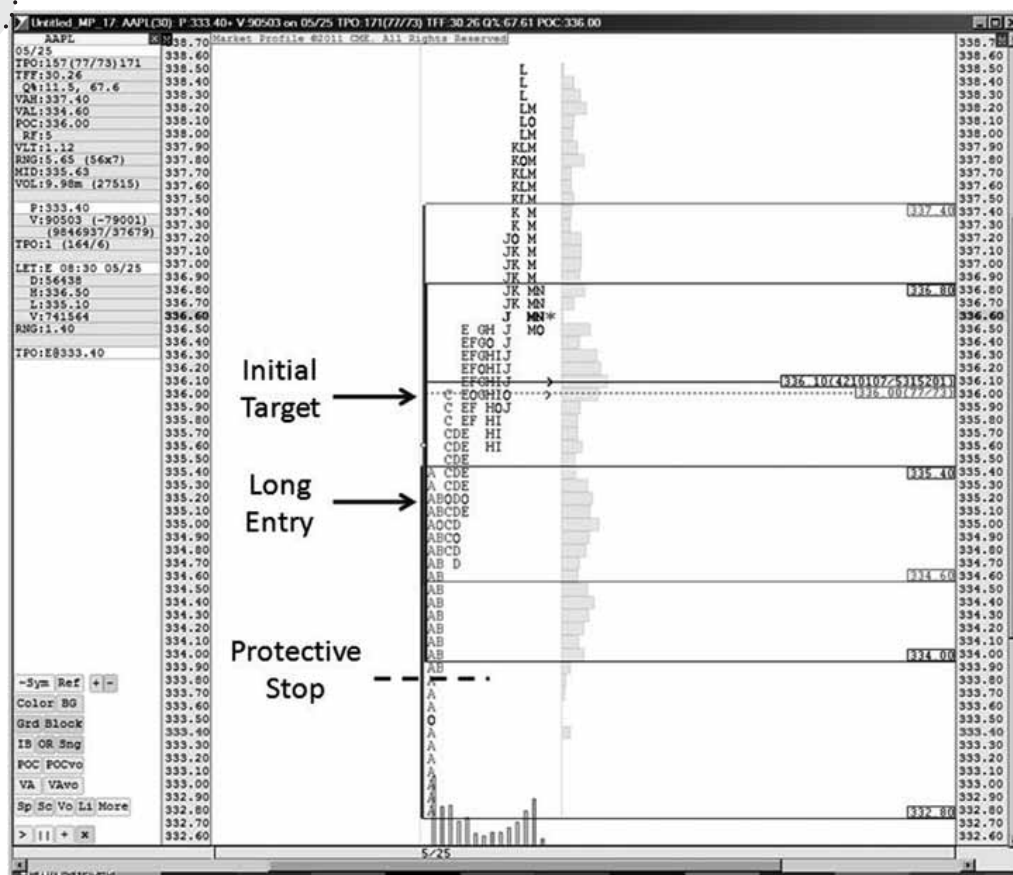
Since there is a wide range of prices for different stocks, we always need to appropriately adjust the Profile price parameters to suit the price scale of each equity instrument. In the case of Apple stock, which trades at prices above \$300, the range for the Profile price scale can be set to ten cents as shown in Figure 11.1.

Intraday Market Developments

In Figure 11.1, Apple's daily Profile chart displays the trading activity for May 25, 2011 just as it would for any other instrument. It identifies the initial trading balance for the day from \$332.80 to \$335.40, the value area that extends from \$334.60 to \$337.40 and the point of control at a price of approximately \$336.00. When we split the Profile, as shown in Figure 11.2, we observe that the activity for the stock was mostly bullish for the day.

Figure
11.2

Multi-Target Trade Profile Strategy with Apple



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For a closer look at this chart visit www.traderslibrary.com/TLEcorner

The Profile chart allows us to monitor the auction process and the daily price developments for the stock throughout the trading day. The day starts out with a rather wide range for the first period A. The market opens at a price of \$333.40 and prints seven TPOs below and nineteen TPOs above the open. This first period or initial half hour points to a bullish sentiment in the market. The stock managed a two-dollar gain in just the first half hour of trading. Subsequently, period B opens near the high of period A, and even though it drops lower into the initial period's range, it never drops below the open of the day, thus continuing with the earlier bullish sentiment observed in the market.

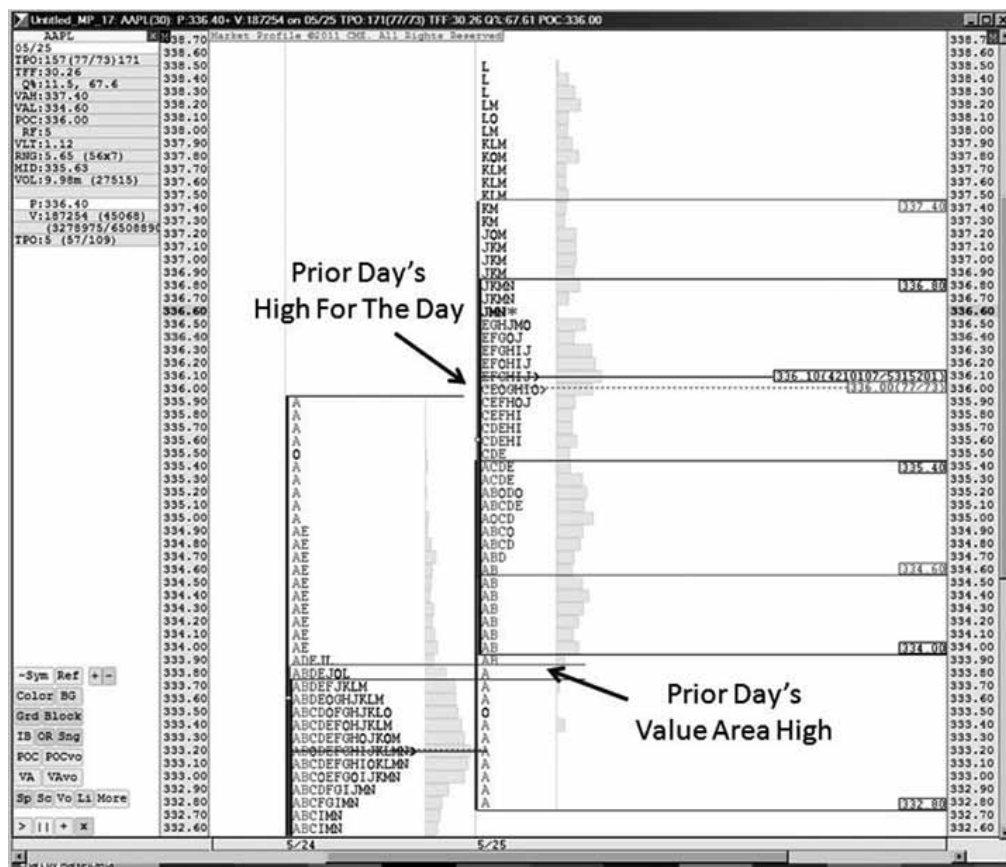
While prices in period B did not extend above the range of the first period, nevertheless, most of the activity in period B took place in the upper half of the initial range. These developments would be considered bullish events for the price retracement during the auction for period B.

Based on these developments and awareness of an intermediate uptrend, a Profile trader may consider a possible early bullish trade entry at the close of period B or the open of period C at an approximate price of \$335.20, as shown in Figure 11.2. An active and dynamic stock like Apple is usually a good candidate for a multi-target trade strategy.

The initial or first profit target for this early entry would be at \$336.00. This is the high from the prior day, as can be seen in Figure 11.3. The second target would be projected at a price of \$337.40. This projection is made based on the daily average true range of movement for the stock, which is about \$6.00 and calculating a price extension to the upside that is at least equal in value to that of the initial balance range of two dollars.

By simply adding two dollars to the initial balance range high of \$335.40, we arrived at the price for our second target value of \$337.40. A strategic protective stop for the trade would be placed at \$333.90. This value for the protective stop is based on a strategic structural

Prior Day's High as Initial Profit Target



level on the chart. As the auction moved lower in period B, the market found support at the low of period B. This is an important level in our initial range development. If this support level were to be broken, our trade would be in jeopardy. It would be safer to take the loss and exit the trade. It is a logical and reasonable location for the protective stop.

It is important to carefully and strategically select the location for a protective stop in any trade; the stop should never be selected arbitrarily or simply based on some dollar amount. The protective stop location should be based on an analysis of developments on the chart. The location of the protective stop should be defined by the

answer to a simple question—at what price level in the Profile structure would the market indicate to us that our trade has failed?

It is at that price point or level that our protective stop should be placed. If the market arrives at this point, there should be no doubt in our mind that the premise of the trade is no longer valid. Sometimes, there may be some earlier warning signals or signs. Naturally, if a trader observes certain unexpected market developments on the chart that forecast the impending failure of a trade, a stop loss may be executed by the trader at another level to minimize and reduce the potential loss. Successful trading requires an alert and flexible mind.

Successful trading requires an alert and flexible mind.

If, due to strict risk tolerance levels, a trader is seeking a tight or a more limited dollar amount for a protective stop loss, then the trader should only select trades that are consistent with their desired risk Profile. They should not compromise on the selection of the location for the protective stop by selecting an improper protective stop level to limit risk exposure. Regrettably, this approach will only result in greater losses.

There are always many different trading opportunities throughout the day. A trader must only select the appropriate ones for their budget and goals. On this same chart, a more limited risk exposure could be obtained by taking a long entry at the breakout, which occurs a little later in the day during period J.

In this case, the entry would be at a price of \$336.50 and the protective stop would be at \$336.10. The \$336.10 price level is the volume point of control and the midpoint of the consolidation that occurred during periods E, F, G, H, I, and J, as seen in Figure 11.2. The profit target would be at the price level of \$337.40 as previously calculated.

It is important to note that risk exposure can also be limited by using smaller trading positions. It is far better to use a smaller position size for a trade than it is to use a misplaced protective stop as a way of reducing risk. Improperly placed protective stops will simply result in an excessive amount of unnecessary losses.

As we have demonstrated in these examples, the Profile structure made it possible for us to identify a number of potential intraday trades for Apple stock. The Profile can also help us with our longer time frame analysis for swing trades. In looking at a longer time frame, it is helpful to use technical analysis in conjunction with Profile concepts to help us gain a more comprehensive view of the market.

Integrating Technical Analysis and Profile Structures

In our technical analysis process we will start with a basic line diagram. The line diagram simply plots the close for each day as shown in Figure 11.4. The activity on this line diagram represents the daily activity for Apple stock over a five-month trading period from January to May of 2011. The line diagram shows us that the activity for this period has been contained between a high price of \$363.39 and a low of \$326.38. Apple stock has been trading in a range during this period. The stock has been moving up and down within this price range.

The stock has recently been trading towards the low end of the range; however, it seems to have found a support level and may be poised to move higher.

Using the line diagram in Figure 11.4, we can draw horizontal lines at key price levels of potential support and resistance for the stock.

On the chart, we have identified a number of key reference levels at \$326.38, \$330.57, \$335.85, \$338.38, and \$363.39. The current close price for the day was at \$337.36. It will remain to be seen if the previ-

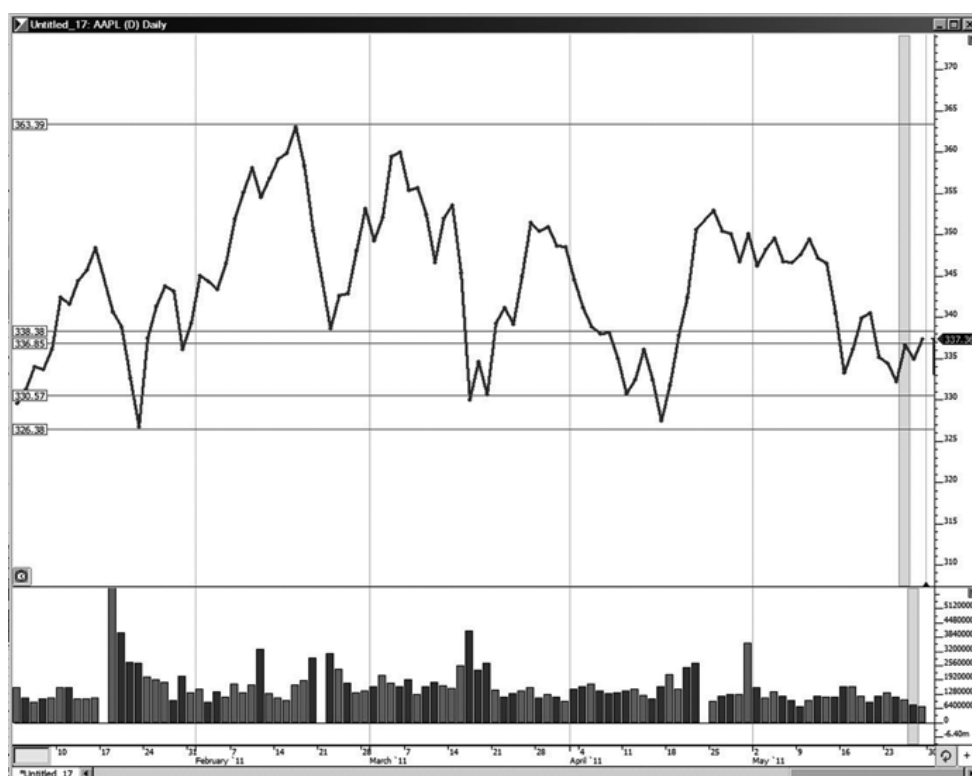
ous resistance level of \$336.85 will become a support level as prices move higher or if prices will return to test this level of new support and drop lower.

On the line diagram chart, the next apparent level of resistance is at \$338.38. This level is quite close to the last daily close of \$337.36. It is only about one dollar away. Knowing that the average true range for Apple stock is about six dollars per day, we should anticipate an immediate test of this resistance level.

Now the stock has been trading close to the value area low of the twenty day composite Profile shown in Figure 11.5. However, it has managed to close above the value area low. Furthermore, these low levels have been previously tested as seen on the line diagram in

**Figure
11.4**

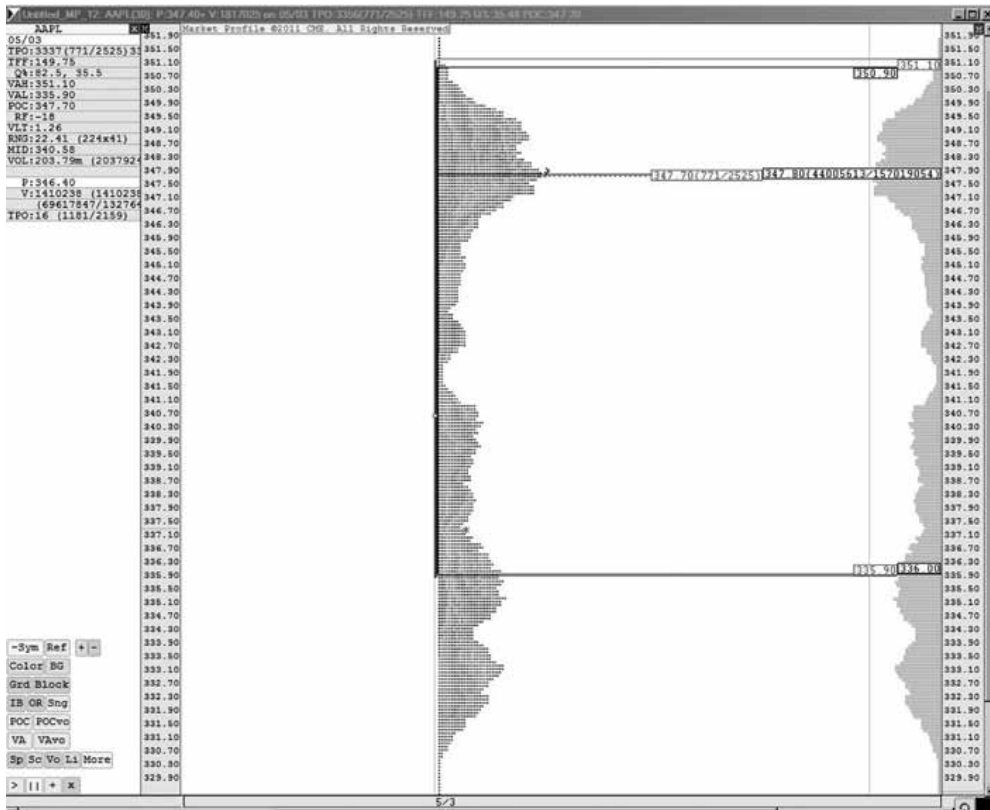
Line Diagram Plots Daily Close



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20-Day Composite Profile

Figure
11.5



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Figure 11.4, and the market has created a distribution of activity around the low value area as seen on the Profile composite in Figure 11.5. This indicates that the market has found support at these levels and is ready to move higher.

If the stock price continues higher, the next level of resistance from the composite Profile will be expected around a price of \$347.70. This is the point of control on the composite Profile in Figure 11.5.

The Profile will not predict future direction, but it does clearly identify for us where prices are relative to value in the market and the potential directional movement. This valuable information cannot be obtained from any other type of chart.

The Profile has thus provided us with an additional perspective beyond the usual information that we extract from the process of technical analysis. Some traders mistakenly think that once they learn to use the Profile that they would abandon the use of technical analysis. On the contrary, the Profile enhances the technical analysis process and adds to the insights gained through technical analysis.

The Profile becomes even more important in real time as the market trades at key levels of transitions. At these key levels, the Footprint can show us the order flow and the volume levels at these key price levels.

The auction process will then reveal to us how the market is reacting to these key price levels. If we observe that a significantly greater volume of the stock is being traded at the ask at a key price level; the buyers are aggressive at this level and prices will move higher. If on the other hand, the sellers are more aggressive, the volume traded at the bid will be significantly higher and price will drop lower.

Technical analysis and the Profile can and do work hand in hand to help traders improve their understanding of the market as well as in making better trading decisions in both the long as well as the short time frame.

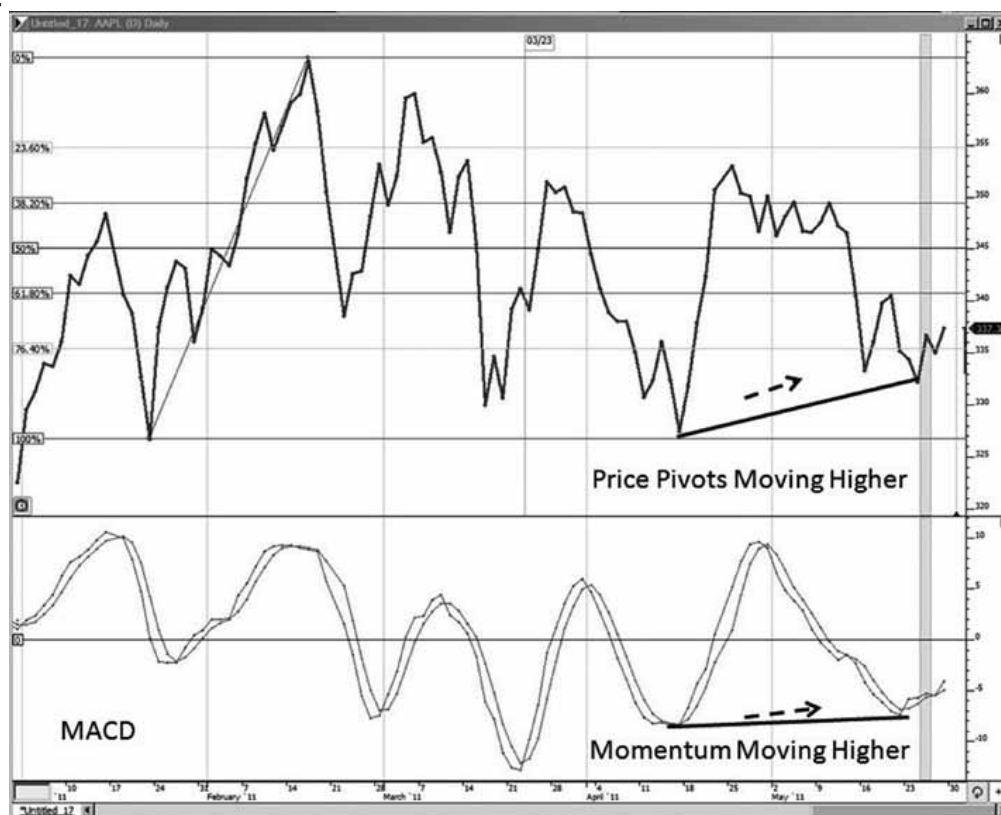
Fibonacci Levels, MACD, and the Profile

Two of the most common and popular technical tools in the equity world are the MACD and the Fibonacci retracement levels. To further demonstrate how we can integrate and utilize traditional technical tools in tandem with the Profile, we have drawn the Fibonacci retracement levels and included a MACD on the Apple daily chart in Figure 11.6.

Fibonacci numbers form the basis of a common method of technical analysis. The basic idea of this analytical method is that in analyzing

**Figure
11.6**

Fibonacci Retracement Levels and MACD on Apple



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For a closer look at this chart visit www.traderslibrary.com/TLEcorner

a price movement, subsequent levels of support and resistance will form around “significant” Fibonacci numbers. These numbers are derived from the work of Leonardo of Pisa, who was known as Fibonacci. The sequence of key Fibonacci numbers is usually 38.2 percent, 50 percent, and 61.8 percent. Fibonacci analysis tells us that these are important percentages for the total price drop or gain in a move.

After a large price movement, technical traders focus their attention to these percentage retracement levels. In the case of our Apple chart in Figure 11.6, the stock has been moving lower from a high price of \$363.39. It has recently attempted to move higher and encountered resistance at the 61.80 percent Fibonacci level. This resistance level is approximately at \$341; however, this price is not a significant level of

resistance on the composite Profile. The significant level will be at a price of \$247.70, the point of control on the composite Profile.

The Fibonacci levels provide another perspective into market activity. They only become relevant to a Profile trader when the Fibonacci levels are confirmed as key reference levels on the Profile chart. If the stock manages to break above the point of control, we can expect prices to move higher and to test the value area high at approximately \$351.10.

Now in looking at the Moving Average Convergence Divergence (MACD) indicator on the lower portion of the chart, we are also able to learn some useful information. The Moving Average Convergence Divergence indicator was developed by Gerald Appel (no relationship to Apple Computers) in the early 1970s. The indicator is based on two lines. The first line is the difference between two exponential moving averages of closing prices. The second line is an exponential moving average of the first line. The MACD is both a popular and versatile indicator. It is sometimes used to generate trade signals and it is often used to identify divergences between price and momentum. There are a variety of settings that can be used for this indicator. The default settings should be adjusted for each instrument. The settings will have a significant impact on the usefulness of the indicator.

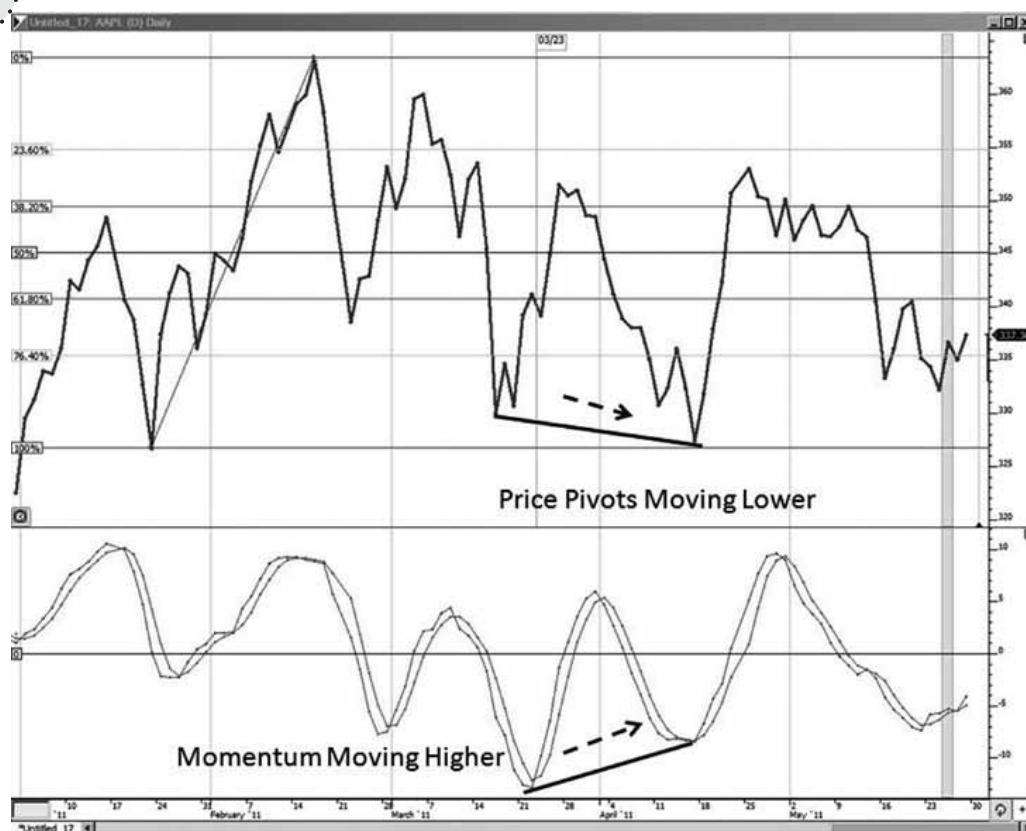
On our Apple chart in Figure 11.6, we look at the MACD to study and observe any correlations between price and momentum. The MACD does in fact provide us with an interesting observation—there is an alignment in direction between price and momentum.

The price pivot lows have moved higher and the momentum lows are also moving slightly higher. This offers an additional confirmation of the likelihood for prices to continue moving higher. It reaffirms our findings from the 20-day composite Profile for the stock.

In Figure 11.7, if we look at the previous pivot price lows and the corresponding lows on the MACD, we will note that the price low or pivot is lower than the preceding price low, while the low for momentum is higher relative to the prior low on the MACD.

**Figure
11.7**

Price and Momentum Divergence



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This is known as a divergence between price and momentum. Prices are moving lower while momentum is rising. This is a bullish divergence and the chart confirms the outcome with a powerful move up by the stock.

In using the MACD, Fibonacci retracements, support and resistance lines, and the data from the Profile chart, we have assembled a confluence of factors that point to a bullish sentiment in the market. This confluence of evidence points towards a bullish sentiment for the stock in the near future. If prices open above the value area low of our composite Profile and continue higher, this would be a good opportunity for a multi-target long swing position with a first target at the POC price of \$347.70 and a second target at the value area high of \$351.00

A protective stop location would be selected based on the entry and the early structural developments of the daily Profile. Naturally, the protective stop must be adjusted to lock in profits after the first target is reached.

Chapter Eleven Quiz

1. Market Profile concepts can only be applied to a financial instrument traded on the CME.
 - a. True
 - b. False

2. In trading, it is important to always have a protective stop in any trade. The best stop location is selected based on a dollar amount that will always prevent a loss.
 - a. True
 - b. False

3. Risk exposure in trading and investing in the financial markets can be limited by using smaller trading and investment positions.
 - a. True
 - b. False

4. In trading stocks, Profile charts should be used in conjunction with technical analysis.
 - a. True
 - b. False

-
5. The key reference lines on a Profile chart are one of the most useful features that help us in analyzing a particular stock.
- a. True
 - b. False
6. The scale on a Profile chart is adjusted automatically as we change the symbols for different instruments.
- a. True
 - b. False
7. Fibonacci numbers or levels are the same key levels that appear as reference lines on a Market Profile chart.
- a. True
 - b. False
8. Identifying the value area on a Profile chart is not possible for thinly traded stocks.
- a. True
 - b. False

9. Market Profile charts can identify price levels that are at an unfair low or high for a stock.

a. True

b. False

10. Market Profile charts provide investors and traders a clear idea about whether or not a market for a stock has been trending or non-trending.

a. True

b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.

12

FOREX MEETS THE PROFILE

Many investors and traders are unaware of the benefits and the profit potential that Market Profile concepts bring to investing and trading in the Forex market. “Forex” is an abbreviation for foreign exchange; it is also often referred to as the FX market. The Forex market is a truly unique financial market. Unlike stocks or futures, the foreign exchange market is not traded on a central exchange, it is an over-the-counter market. The trading takes place in an “interbank” marketplace. The main centers for this activity are London, New York, Tokyo, Frankfurt, and Sydney, thus making Forex a truly global market that never sleeps. It is a true twenty-four hour market that opens on Sunday 5:00 p.m. EST to Friday 5:00 p.m. EST. Forex trading begins in Sydney, and follows the sun around the globe as the business day begins in Tokyo, London, and New York. Unlike other financial markets, Forex gives traders and investors an opportunity to immediately respond to global news and currency fluctuations, whenever they occur—day or night.

Unlike stocks or futures, the Forex market is not traded on a central exchange but on an over-the-counter market.

The Forex market is also unique because of its large trading volume, high liquidity, geographical dispersion, and continuous 24-hour operations. Moreover, many diverse global factors affect and influence the capital flow and market exchange rates. The Forex market also offers low margins of relative profit compared to other fixed income and high leverage levels to enhance profit margins.

The Spot Market

The largest and most frequently traded market in Forex is the spot market. This segment of the Forex marketplace is described as the spot market due to the fact that market trades are technically resolved immediately, or “on the spot.” In reality, these trades usually require a couple of banking days for actual settlement.

On the spot market currencies trade in pairs. A trading pair consists of a base currency and a quote currency. The first currency listed in the pair is the base currency, while the second currency is the quote currency. In the case of the EUR/USD pair, the Euro is the base currency, and the USD is the quote currency. On the spot market in trading the EUR/USD, the trader is buying or selling Euros using the United States dollar.

In a Forex trade, the buyer is buying one currency while simultaneously selling another. In other words, they are exchanging the sold currency for the one being bought. The EUR/USD is one of the most actively traded currency pairs. Most Forex traders focus on the major liquid currency pairs. “The Majors” include U.S. Dollar, Japanese Yen, Euro, British Pound, Swiss Franc, Canadian Dollar, and Australian Dollar. In fact, over 80 percent of the daily Forex trading volume is among the major currency pairs.

Value and Forex

Since Forex is not traded on any central exchange, there is no bid or ask volume data that is available for the Forex market from a central exchange. As a result many Forex traders discount the relevance and efficacy of the profile to the Forex market. Interestingly enough, the core concept and rationale for different currency exchange rates lies in the perceived market value of each currency. The key word that is worthy of our attention here is “value”.

Value identification also happens to be one of the distinguishing features of the Profile. The Profile can easily and clearly identify for us the value area for any currency pair on the Forex spot market.

This makes the Profile specially suited for the Forex market. In fact, it is the only charting method available that will identify value and changes in value for any currency pair.

In Figure 12.1, the Profile chart displays ten Profiles for ten 24-hour sessions of trading activity of the Euro/U.S. dollar on the spot Forex market. Just as we have previously done with stocks, we have had to adjust the price parameters on the Profile chart to accommodate the pricing structure for the EUR/USD currency pair. This currency pair requires that we look at 1/100th or .0001 as our basic unit for the currency pair. The smallest price increment for a currency is called a “PIP”. The term “PIP” is an acronym for “percentage in point.” A percentage in point (PIP) represents the smallest value of measurement for currencies on the Forex market. The smallest move that a PIP can have is often referred to as one basis point.

On the price scales on the right side and the left side of the chart in Figure 12.1, we will observe that all prices are shown to the fourth decimal place, on the basis of a single PIP.

Ten Forex Profiles

Figure
12.1



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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As we examine the chart, we will observe that it clearly identifies the value area for each of the ten days on the chart. On the first Profile, the value area A expanded higher during the 24-hour trading session. The session closed near the high of the value area.

More importantly, on the following day, we observe that the market continued to trade around the value high of the prior day. The low for value area B never dropped below the mid range of the prior day, indicating a bullish sentiment in the market that is accepting of higher values. Once again, this bullish sentiment is further confirmed with a close above the high of value area B.

Sure enough, the market continues to move higher and we can observe that value area C has moved higher above the prior day's value

area. However, the range for value area C shrinks and becomes much smaller, a sign that the market may not be as bullish as it was during the prior trading sessions.

On the following session, prices do move higher and the high for value area D does extend higher. Nevertheless, weakness in the up move is apparent as the D value area drops to overlap the prior session's value area. This indicates further weakening in the move up and profit taking.

The low for value area D drops to the prior session's point of control (POC). Prices moved lower on the following day, confirming the bearish sentiment that was observed and an end to value moving higher. The chart presents an opportunity to sell the market as higher value was rejected and prices continued to move lower.

Value continued to move lower in sessions E and F. However, value moved back up in session G and continued to consolidate in sessions H and I. The market pushed higher once again in session J to test the previously rejected value highs of periods C and D.

This Profile chart has provided us with a concrete example of how Profile charts allow Forex traders to view market developments and visually track the movement of value in the market, allowing them to capitalize on trading opportunities that are not visible on any other type of chart.

Key Reference Levels

Since each Profile structure is a function or a product of actual trading activity, the Profile structures help us in identifying key reference levels in the market. In Figure 12.2, note how the market returned to the price area around the point of control for the A session. The POC for periods A, G, and H are all within close proximity of each other, indicating acceptance of value in this price area.

**Figure
12.2**

Condition of the Market



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For a closer look at this chart visit www.traderslibrary.com/TLEcorner

Note how the actual POC price levels for sessions H and I are within a few PIPs of each other—a further confirmation of price acceptance at this level.

Condition of the Market

The Market Profile can also be invaluable in helping a Forex trader understand the condition of the market. The condition of the market may be balanced or imbalanced. This becomes apparent from the shape of the Profile. Forex markets are usually either trending or non-trending. The shape and structure of a Profile make it easy to identify and distinguish between trending and non-trending sessions.

As the market embarks on a directional move, the Profile shape is long and narrow as can be observed in sessions A and J in Fig 12.2.

On the other hand, as markets contract and consolidate, the value area is limited and the activity clusters around the POC as observed in sessions B, G, and I on the same chart.

Market Profile Structure

The Profile structure also provides a number of visual patterns that can help a Forex trader recognize important market developments and capture profitable trading opportunities. These patterns include buying tails, selling tails, ledges, and minus developments.

Forex Buying Tails

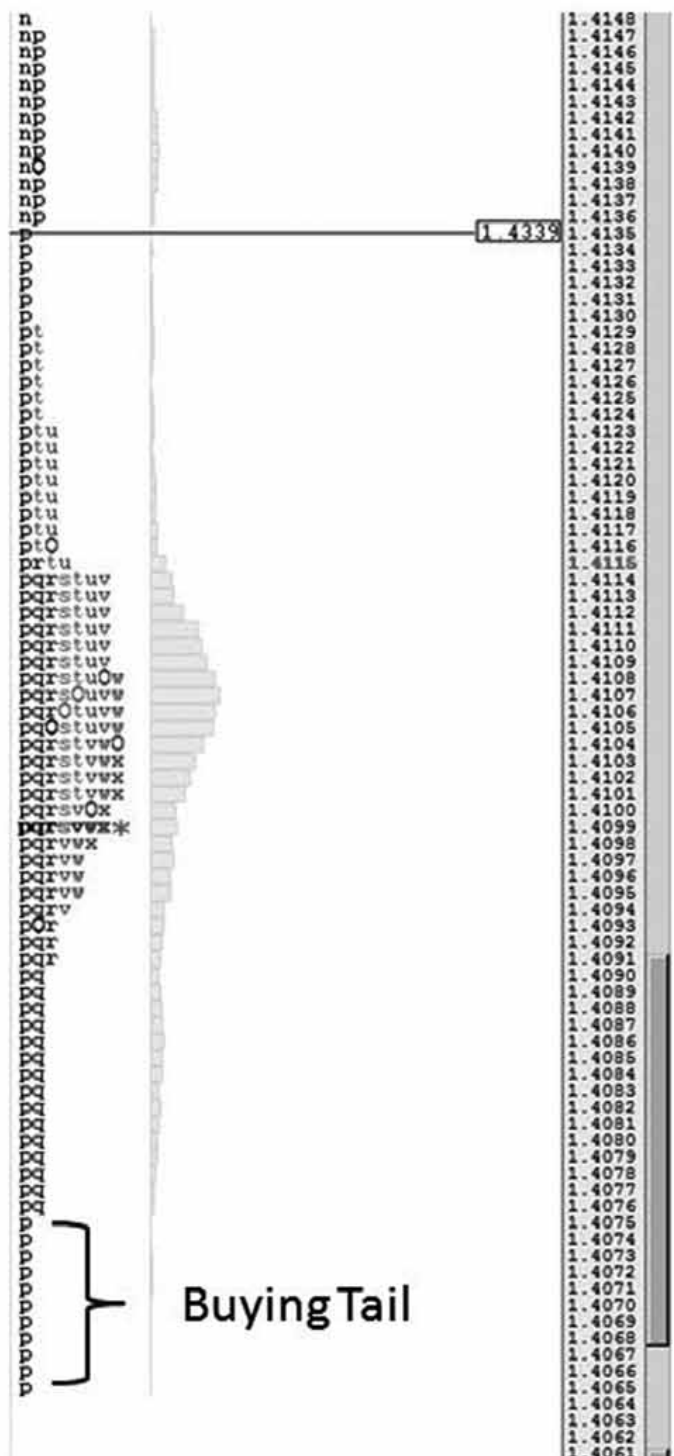
The Forex market frequently involves large institutions and major central banks. These participants sometimes influence the Market Profile structure in a powerful and visible way. In Figure 12.3, when prices dropped to a level of 1.4064, prices immediately found a strong responsive buyer or buyers. The aggressive buying response created a buying tail that started at the price level of 1.4064.

At this price level when the responsive market participant stepped into the market, their buying power immediately took the market higher. During the P period, the market rose from a low of 1.4064 to a price level of 1.4147. A total move of about 83 PIPs, this demonstrated a clear commitment of the buyer or buyers at this level. It established a strong support level for the market at this level. In typical fashion of professional buyers, they did not continue to buy at higher prices. They stepped back and allowed the market to drop back lower, providing them with other buying opportunities at lower prices.

The market rolled back to a price level of a 1.4075 in period Q. Once again the aggressive buyer or buyers stepped in and took the market higher to a price level of 1.4116. This reaffirms the commitment of the

Buying Tail

Figure 12.3



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buyers. This commitment is also apparent in subsequent periods “r,” “s,” “t,” “u,” and “v.” The market continues to be bought every time it moves lower.

However, the market never returns to the low of periods P or Q. The market has found value at a higher level and is likely to push even higher. These buying tails and subsequent price developments provide the Forex trader with valuable insights to major market participant perceptions and behaviors about the currency pair.

Forex Selling Tail

The selling tail is the opposite of a buying tail; it demonstrates commitment on the part of a seller or sellers in the market. Once prices reach a certain high price, the market finds abundant sellers that are willing to supply the market at those price levels. A selling tail is a clear rejection of value at these high price levels. On the chart in Figure 12.4, we have a significant selling tail in period J.

As prices attempted to retest this price high in subsequent periods, the market continued to make lower highs in periods “q,” “r,” and “s”. Value moved lower for the session and the market began to distribute around a price of 1.4187 as shown by the POC in Figure 12.4.

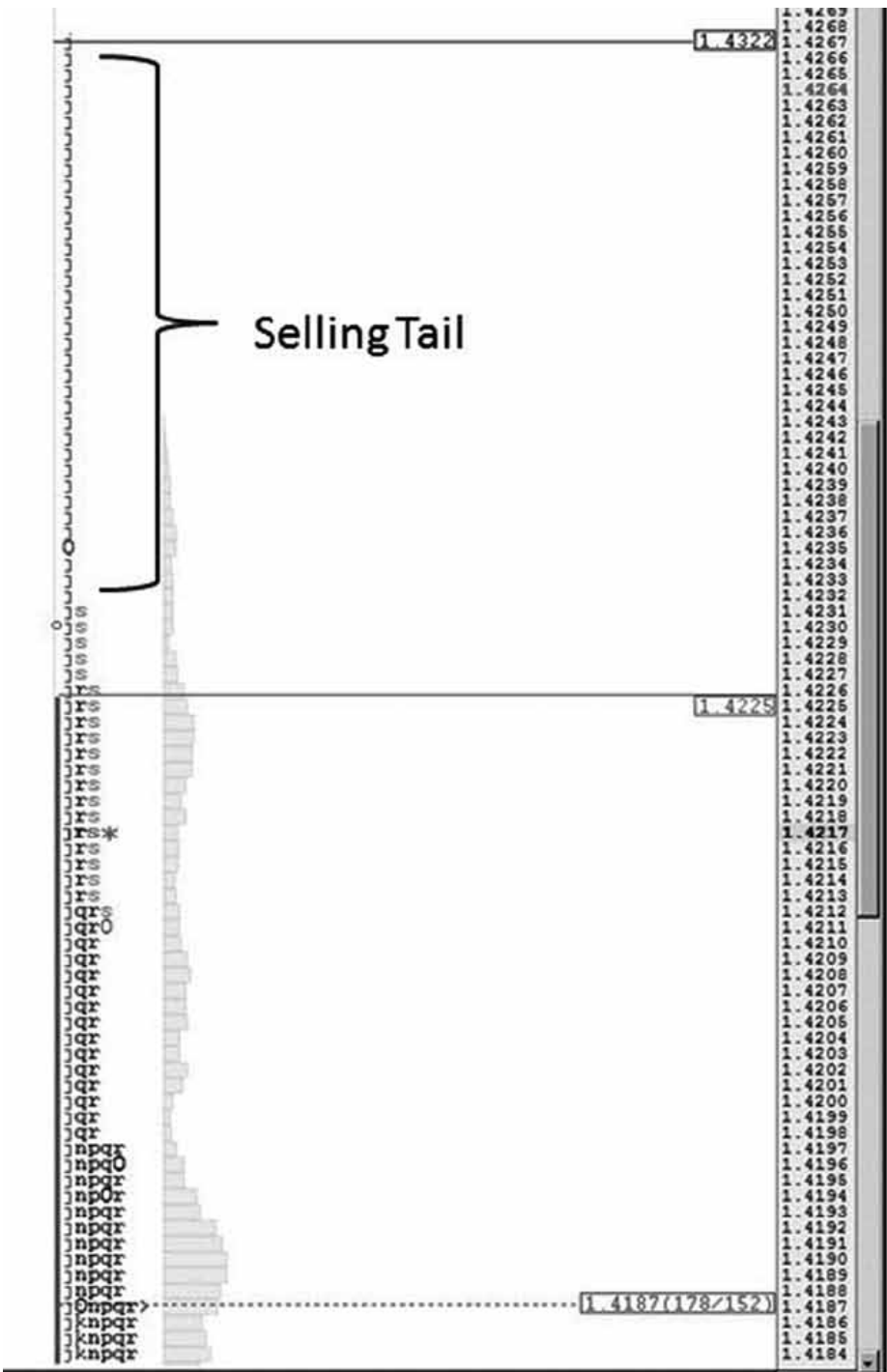
Forex Ledge

A ledge on the Profile chart is a price level where the TPOs form a ledge or a platform on the chart. The ledge can identify a level of support or resistance depending on whether the TPO columns move up or drop lower to it.

In the case of Figure 12.5, the ledge on the chart is a support ledge. Prices dropped to this level in period G, and again in periods H and “m.” Every time price came to this price point, it found buyers and

 Selling Tail

Figure 12.4



Source: MarketDelta; copyright © 2011 by MarketDelta LLC
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the market moved back up. The immediate rejection of price at this level creates the shape of the ledge.

A ledge needs at least three TPOs to begin to form. The more TPOs on the ledge, the stronger the support or resistance at the price level of the ledge. A ledge is also stronger if it is tested at a later period and manages to still hold as we observe on the chart in Figure 12.5. The ledge began to form with two consecutive periods: G and H.

Four periods later in the session, during period “m,” the market returned once again to visit the ledge, and the ledge remained in place.

This adds to the credibility of the support level at the ledge. This ledge support level is further confirmed, as it becomes the low of the value area for the session.

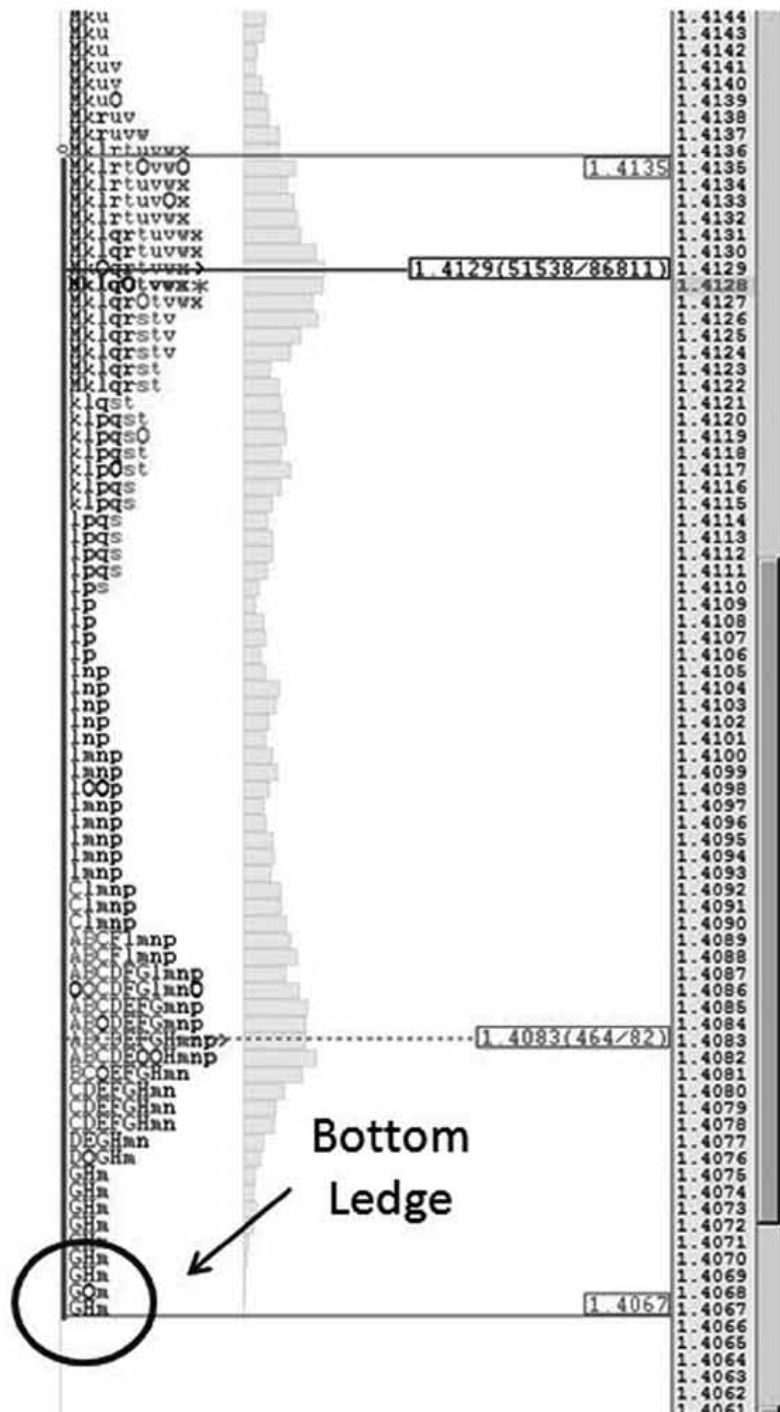
Minus Development

A minus development is in many ways similar to a buying or selling tail. It is a price area or zone on the Profile structure where we only see a single TPO column printed. This happens as result of the market quickly moving through a price zone as observed in Figure 12.6. The market simply does not spend much time in that price zone. Since the market has determined that prices in this zone are either at an unfair high or at low, the market will not waste any time trading in that zone. It will sail right through it, quickly leaving it behind and moving to a new price area where it has determined fair price and value to be.

If the market is quickly moving higher, it will leave a minus development below it. In this case, the area is obviously one of unfair price lows and thus an area of support. If on the other hand, the market is moving lower and leaves a minus development above it, this price area above becomes a zone of resistance or unfair price highs.

Figure
12.5

Bottom Ledge



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Figure 12.6



The significance of the minus development for a Forex trader is in the fact that at some point during the session there is a high probability that the market will come back to re-test this area of minus development, making it a key reference point for us on the Profile structure.

This is especially important for Forex traders, because of the way that the Forex market usually moves. It often moves in spurts. Major institutions create strong directional price moves once their decision has been made to move to a new target price level. The move is done in a rapid and deliberate manner. As a result, once the market moves directionally, it moves rapidly and forcefully, creating these minus developments in its path during the trading session.

**Once the Forex market moves
directionally, it moves rapidly and forcefully,
creating minus developments in its path.**

Frequently, Forex traders are caught off guard and unable to participate in this rapid directional drive. If they enter the trade once the rapid directional move has started at a market price, the spreads are wide and the entry is usually at the end of the move. If a limit order is placed, it usually will not be filled. If a market order is used and entry is made, the market seems to move just a tad higher only to reverse its direction. Many traders will find that the market will experience large drawdowns that will often blow out their stops. Invariably, once the stop is triggered, the market eventually returns to the original direction of the trade.

Using the Profile, a Forex Profile trader takes a different approach to the process. They will not chase the move or enter the trade using a market order that fills them at a price at the top of the initial directional move. Instead, they will patiently wait for the market to return to re-test the area of minus development. If the zone holds as a support or resistance level, they are able to place their trade at a more favorable price and move with the market in the direction of

the market. Moreover, their protective stop can now be strategically placed based on the minus development zone, allowing for better risk management and a structural based selection for the protective stop.

As discussed in these examples, understanding and applying Profile concepts offers Forex traders many strategic trading opportunities. In order to maximize the benefits of the power of the Profile in Forex trading and overcome the hurdle of absence volume, Forex traders trade the spot market while simultaneously looking at the currency futures charts.

The currency futures are traded on a central exchange and have all of the volume bid/ask data. The same major participants are trading in both markets. Consequently, currency futures Profile charts can be correlated with the spot market and offer another element of confluence for the Forex trader.

The Profile is as formidable a tool for the Forex market as it is in other markets.

Chapter Twelve Quiz

1. The Forex market is unique because of its large trading volume, high liquidity, geographical dispersion, and continuous 24-hour operations.
 - a. True
 - b. False

2. The main financial centers for Forex trading activity are Chicago, Paris, Geneva, and Singapore.
 - a. True
 - b. False

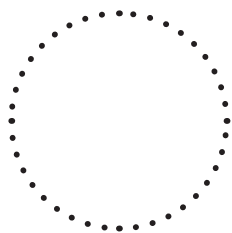
3. Most Forex traders focus only on the major liquid currency pairs. These major currency pairs include the U.S. Dollar, Japanese Yen, Euro, British Pound, Swiss Franc, Canadian Dollar, and Australian Dollar.
 - a. True
 - b. False

-
4. Since Forex is not traded on any central exchange in the United States, only international traders and investors outside the United States receive real-time or accurate bid and ask volume data for the Forex market.
- a. True
 - b. False
5. The Profile chart structures for Forex instruments are different from the traditional Profile chart structures observed for stocks and commodities.
- a. True
 - b. False
6. Forex markets are not well suited for Profile charts because they are open 24 hours and they are usually either trending or non-trending.
- a. True
 - b. False
7. Forex buying and selling tails appear rather prominently on a Profile chart.
- a. True
 - b. False

-
8. The ledge on a Profile chart can identify a level of support or resistance depending on whether the TPO columns move up above it or drop lower to it.
- a. True
 - b. False
9. A ledge on a Profile chart needs at least three TPOs to begin to form. The more TPOs on the ledge, the stronger the support or resistance at the price level of the ledge.
- a. True
 - b. False
10. A minus development is often described as a single print on a Profile chart. It is a price area or zone on the Profile structure where we only see a single TPO column printed.
- a. True
 - b. False



For answers, please visit the Traders' Library Education Corner at www.traderslibrary.com/TLEcorner.



CHALLENGES AND OPPORTUNITIES

My goal as an educator has always been to impart valuable and practical knowledge to my students, knowledge that would genuinely help them to achieve their goals and improve their performance. The goal of this book is to invite as many traders and investors as possible to learn about one of the most remarkable analytical tools on the market, the Market Profile. I have found the Market Profile to be a most powerful asset in my analysis and market studies. In this book, I have tried to present key Market Profile concepts in a concise, simple, and easy-to-understand manner. I hope that this book will attract many new individuals to discovering and exploring the power of the Profile.

Many traders and investors focus their attention on looking at indicators or external market factors for market information, forgetting that indicators must first obtain and process market data to produce a result. Indicators will only indicate to us what has already

happened in the market. Other traders choose to use Gann, Elliot, Fibonacci and even moon tides to time the markets. Once again, this takes their focus away from the primary source of information, which is actual market activity.

The Market Profile, on the other hand, is genuinely different. The Market Profile keeps traders and investors focused on what really counts in the market, actual market activity. Instead of turning attention away from the market in search of answers, the Profile keeps its focus on the market's primary source of information, market data. The Profile structure is actually built and formed based on market activity and data. Profile traders rely on interpreting this primary data for understanding the market and identifying potential profitable trading opportunities. The Profile helps traders and investors to base their trading decisions on data that is derived from actual market activity and it helps them to maintain their focus on the most reliable source of information in the market, the market itself, thus making it one of the most powerful analytical tools available.

Over the past two decades, the markets have significantly changed and have become more and more challenging to trade. There is a sea of data and information in the market. The Profile organizes and structures this data in a meaningful way that is tremendously helpful in analyzing and understanding the market. A better understanding of the market always leads to better investing and trading decisions.

Market Order and Structure

Market activity is neither random nor chaotic; it merely appears that way to the untrained eye. In fact, there is a distinct order and structure to the markets. This structure is created by the activities of the professional market participants in the marketplace. These professionals are not gamblers and are certainly not in the business of gambling away their huge capital holdings in the financial market.

Their investment and trading decisions are based on extensive research, analysis, careful planning, and strategic execution. As individual traders or investors, we must learn to understand the actions of these powerful professionals, or the “smart money,” as the market jargon describes them. There is no doubt that these major capital investors have a distinct advantage in the market place, since they often have the ability to actually influence the market. This is not an anomaly in the business world.

If we examine any market, we will find that the large volume participant always has a distinct advantage over the small participant. A large corporation that is purchasing a fleet of a thousand automobiles or more will most certainly procure these cars at a significantly lower per unit cost than an individual buyer who is buying a single automobile. In almost any market, there is usually a wholesale and a retail price for any item. A wholesaler is never expected to function as a retailer and a retailer never expects the power or benefits that a wholesaler receives. The financial markets are not any different; size definitely matters when it comes to the financial markets. Size in the financial markets comes with many advantages. However, this should not discourage or frighten the small participant.

On the contrary, just as there are many inherent advantages for the large volume participant, there are also some distinct disadvantages. Large investors can never be as nimble and flexible as a small investor or trader. It may sometimes take a few weeks for a large investor to easy in or out of a position. The flexibility that a small investor enjoys can often help him to enter and exit his positions in a matter of seconds.

The activities of the large institutional investors are neither random nor chaotic. They are deliberate, organized, and well planned. These patterns of activity are visible to the learned eye. The Market Profile provides us with an extremely valuable tool for monitoring and understanding this activity in the marketplace.

In my experience, I have found that consistent success in trading and investing can only be achieved through acquiring the proper education, experience, and proper risk management strategies. As with any other worthwhile endeavor in life, investing and trading requires hard work, patience, and persistence. The learning process is a journey that demands an open mind and a strong desire to succeed. Armed with the proper mental attitude, the journey does not always have to be arduous. It can in fact be incredibly enjoyable and rewarding.

Personal Journey

For me, the journey into the world of investing started at a rather early age. As a young boy, I would often watch my late father read the Wall Street Journal and scribble tiny “X” and “O” letters on a sheet of graph paper with a steaming cup of coffee by his side. He was always very focused and absorbed by this important task. I simply thought it was a more complex or adult version of tic-tac-toe. By the age of nine or ten, I began to understand that this was not a game of tic-tac-toe, but rather, a technique that my father used for analyzing stocks and that it was called a point and figure charting method. As I grew older, my father taught me how to draw these enigmatic point and figure charts and more importantly, how to interpret them to make decisions about buying or selling. I learned that it was not a stock selection method, but a timing method for market entries and exits.

My father was a cultural anthropologist and he always believed that human behavior towards a company’s products or services was the ultimate gauge of the company’s future success. He had a very simple strategy for selecting stocks, he would always buy or invest in companies that had products or services that we purchased and enjoyed as a family. He figured that if we used and liked the quality of a certain company’s products that many other people were also likely to recognize those same benefits and that these companies were then likely to grow and succeed. As simple as this logic was, he was usually right.

I suppose his theory still holds true and is best illustrated by Apple computers and its recent market success. My father never thought of himself as a trader, he simply described himself as an organized investor, who carefully picked his entries and exits based on a point and figure system. The holding period did not factor into his decision-making process. He simply relied on the results of a point and figure chart to determine the duration of his holding period. Sometimes it was several month or several years. He never used a stop loss and he never shorted a stock. He only sold shares that he owned. These were the simple and basic rules that he consistently followed and ultimately allowed him to pay for all three of his children's college educations. He taught me that investing was about common sense, planning, and analysis.

In my early school days, I had always been fond of mathematics and I was often recognized for my stellar performance on math tests. Consequently, when it was time for college I decided that I would put my mathematical skills to use and study to become an electrical engineer. I completed my electrical engineering degree at the University of Pittsburgh. It was a great educational experience at an outstanding school. I graduated from engineering school at an incredibly exciting time in history. It was the dawn of the electronic and information age. It was a very exciting time for any young electrical engineer. I was intrigued by every new gadget and new technology on the market, and there was a plethora of them. As soon as I started working as an engineer, I was eager to invest a portion of my own hard-earned wages.

I followed in my father's footsteps and I bought a few shares in different new companies that had products I used and liked. In the early eighties, it was not hard to find growth companies or to make money in the markets. When discount brokers started to appear on the scene, it was simply a dream come true for me. I could now conduct more frequent transaction at a lower costs and I could realize quicker gains. The markets began to demand more of my interest, attention, and time. My focus as an investor was changing; I was now looking for more short-term transactions. I knew that I needed to further

my education; my large collection of books on technical analysis and charts was no longer adequate. I wanted to develop my business acumen and I knew that as wonderful as my engineering school was, it did not provide me with the kind of investment education that I desired.

My first engineering job out of college had moved me to Salt Lake City, Utah. I decided to take a day off from work to visit the local business school at the University of Utah. I met with some of the faculty at the school and I reviewed the course catalog for the school. They welcomed and encouraged me to apply to their MBA program. However, this meant I would not be able to take any classes until I was admitted into the MBA program. I was impatient and eager to learn and the only way it was possible for me to immediately start taking the business classes of my choice was to enroll once again as an undergraduate student. This was not a problem for me; I promptly completed the required paperwork and registered for the upcoming semester, which was scheduled to start a few weeks later.

I was excited at the prospect of learning about financial accounting, finance, business strategy, and strategic management. I started taking my business classes while studying for the GMAT and preparing to join the MBA program. Enrolling at the University of Utah School of Business was probably one of the best decisions I had made in my life. It completely changed my career path and my life. The business school was quite different from the school of engineering. I took to business school like a fish to water. The school had an outstanding faculty that recognized my appetite for knowledge and nurtured it. In my second year at the school, I became a teaching assistant and by my third year, I was an actual instructor at the school of business.

My years at the school of business were some of my best educational years; I learned more than I ever thought that I would. Moreover, I met many other interesting and ambitious young entrepreneurs. I made many friends, some of whom I continue to keep in touch.

As much as I loved the world of business and finance, I did not want to completely abandon my engineering roots. I started to look for

an opportunity that would allow me to integrate and combine my newly acquired business and technical skills. I interviewed with a number of large corporations for managerial positions and I had a couple of attractive offers. However, none of the offers afforded me the type of opportunity I was looking for. I sought the counsel of one of my favorite professors and mentors at the school of business. As usual, he was full of encouragement and support. He advised me to be patient and wait for the right opportunity. A week later, he offered me the contact information for the president of a prominent private investment firm. He informed me that the president of the firm was looking for an assistant to help him manage the firm and that he felt this would be a great opportunity for me. He recommended that I promptly contact and meet with the president of the firm. I must confess that my young ego was not very receptive to the idea or title of “assistant,” especially since my other offers came with far more impressive managerial titles. Nevertheless, I followed my mentor’s advice and promptly arranged for a meeting with the man who would soon be my new boss.

The private investment firm’s offices were the most opulent that I had ever visited for a job interview. The president of the firm was unlike anyone that I had ever previously interviewed within the past. He was someone in a completely different league, brimming with confidence and possessing a radiant sense of purpose; he was articulate and extremely witty. He held a civil engineering degree, a Stanford MBA, and over twenty years of experience building one of the largest investment firms in the state. He was distinguished, handsome, intelligent, and very well dressed. He was also the wealthiest man that I had ever met. Out of respect for his personal privacy and the trust and confidence that he always placed in me, I will keep his identity and that of his firm confidential.

He had a clear vision for his company and he assured me that in working with him I would learn more in one year than most corporate managers would learn in a decade. He was decisive and deliberate and during our first meeting, he made me a job offer, and

encouraged and invited me to work with him. When I politely expressed some reservations about the title of “assistant,” he smiled and he told me to choose and print on my business card whatever title I found suitable.

He quipped that he would even gladly swap titles with me if that would entice me to join the firm and he wittingly remarked that in the world of investments, it is never about titles, it is all about performance. Moreover, he predicted that in my future business encounters, I would be certain to meet many incompetent individuals with most the impressive of titles. Before I had a chance to respond, he stood up and asked me to follow him to my new office. It was an office that I would gladly pay to work; an executive suite that was close in size to my apartment. It had a large conference area, a reception area with a sofa and armchairs, and a beautiful large window that extended along the entire west wall of the office. My decision was immediately made and I graciously accepted his offer. I was to start my new job on the following morning. I was so excited; I was unable to get a wink of sleep that night.

Once I joined the firm, I began to better understand the nature, size, and scope of diverse investments involved. The firm had an extensive portfolio of commercial and real estate holdings as well as significant capital investments in the financial markets. My boss felt that my engineering skills would be invaluable in working with architects and engineering consultants. Moreover, they would be helpful in administering and managing the firm’s capital construction projects. In addition, my business and financial background would be put to use on the financial and capital management side of the business.

Over the next months and years, we continued to work very closely together. My boss was a gracious and generous teacher; he was always willing to take the time to explain the wisdom behind his actions, strategies, and decisions. He was also a great listener and was always interested in my input and feedback. He genuinely wanted to teach me the dynamics of his business. I attended almost all of his business

meetings and I became acquainted with all of the firm's business partners, professional consultants, and advisors. He felt that the more I learned to do at the firm, the less he had to do. Sure enough, the better I understood the business, the more significant tasks and decisions were delegated to me. The more my performance improved, the more responsibilities and the larger the projects that were assigned to me.

We had a great working relationship based on mutual trust and respect. My years in working with this private investment firm catapulted my knowledge and skill. This wonderful opportunity offered me a chance to work with some of the brightest minds in the investment world and some of the best money managers that I have ever known. I learned how large capital funds were managed and traded. I learned about the challenges that are involved in trading and investing large positions and about the strategies that are used to hedge positions and limit risk exposure. In addition, I learned about the ins and outs of the real estate development business. I worked many long hours and weekends but I loved every single minute of it.

I learned more than I could ever imagine about financial investments, capital structuring, marketing, project management, construction planning, construction management, risk analysis, and real estate transactions.

For the first time ever in my life, my own business decisions were actually influencing the return on investment for money invested by others. It was a most rewarding experience; I truly enjoyed and loved my work.

This employment opportunity afforded me the chance to use state of the art technologies and the most advanced financial tools as they became available on the market. My engineering skills allowed me to develop new programs and customize existing software programs to assist in our decision making process.

Life Balance

As much as I enjoyed my work, there was something important that was missing in my life. Almost all of my friends and peers had married and started their families. The years were quickly moving by and I was still a single man. I was devoted to my work, but I also genuinely wanted to have a family.

I confided in my boss about my feelings and I was delighted that he was both understanding and supportive. He had a lovely family of his own, whom he dearly loved and placed above all.

We worked together for over a year on selecting and training my replacement. I made a decision to return to graduate school to work on a doctoral degree and to open the door for new relationships. I applied to the University of Maryland Graduate School, I was accepted as a PhD candidate and I promptly started my course work. Over the years, I have managed to start a family and complete my PhD. Starting a family was much easier and far more enjoyable. In addition, my wife's support, counsel, and friendship have been invaluable to me in all of our diverse entrepreneurial endeavors and business ventures that we have pursued together over the years.

Completing a doctoral education is not so much about acquiring new or advanced knowledge as it is about learning and understanding proper research methods and analytical techniques. A doctoral degree, as most doctoral students will attest, is also a test of endurance. A PhD candidate must first complete their graduate course work, then prepare and sit for a comprehensive exam, which is then followed by a qualification exam, preparation of a dissertation proposal, assembling a dissertation committee, conducting the proposed research project, writing a dissertation based on the research proposal, defending the dissertation methodology and findings, and finally revising the dissertation for final committee approval.

This arduous process demands patience, hard work, perseverance, and most of all, discipline. Many of the research and analytical skills that I learned, cultivated, and developed working on my PhD have been invaluable in helping me to further study, analyze, and understand the financial markets.

Since I enjoyed teaching, as I pursued my doctoral degree, I continued to teach whenever possible. I especially enjoyed teaching and training working professionals. They understood and appreciated the knowledge and were able to quickly benefit from it in their practice. Over the years, I have taught many workshops, courses, and seminars in a variety of management, leadership and financial topics.

A good teacher always understands that in order to remain at the top of their craft they must continue to invest in their own learning process. As I continue to develop, design, and teach trading and investment courses, I attend as many professional educational programs as I can. It is always a genuine pleasure and a great experience to work with and learn from other accomplished professionals in the field. Whenever possible I will also participate and visit available live trading rooms.

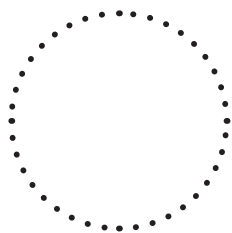
Path to Success

Undoubtedly, there are many different roads and path to becoming a successful investor or trader; however, there is no single path that is paved with gold. Every road has its bumps and challenges along the way. Unfortunately, many investors and traders spend an extensive amount of time, energy, and money searching for that one illusive secret passageway that will lead them to instant riches and consistent success. Regrettably, this illusion leads many individuals to fall prey to numerous unscrupulous marketers and vendors offering to sell them the treasure map leading to the fountain of wealth. This has created many cynics and skeptics in the investment world and a

common thinking that markets are completely random and have no discernible structure.

Consequently, many individuals think of trading and investing as some form of gambling. While it is true that there is no secret formula or “holy grail” for consistent profitability in the market, the markets are not chaotic or random, and trading and investing is not gambling. Investing and trading are serious business endeavors that require capital, market knowledge, strategic planning, risk management, discipline, and mental fortitude.

Anyone in search of instant financial success or simply looking for that one big win will rarely find it in the financial marketplace. This is one of the most important early concepts that I always stress to all of my students. There is an art and science for successful investing and trading, there are analytical techniques and strategic rules that must be followed for positive results. Consistent success in the financial markets is not a product of luck or chance. It is a function of education, knowledge, and experience, which can all be acquired with time. Individual success in the financial markets is a direct result of how well each individual can manage risk, understand, and interpret the structure of the markets. Learning about and understanding Market Profile charts and concepts will provide investors and traders with a most valuable addition to their arsenal.



ABOUT THE AUTHOR

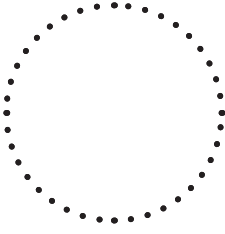
Dr. Keppler is an active trader and the Director of the Strategic Trading Educational Program. He holds a Bachelor's Degree in Electrical Engineering, a Bachelor's Degree in Business Finance, as well as a MBA and a PhD in Business. Dr. Keppler has taught at the University of Utah School of Business, the University of California, the College of Notre Dame, and the University of Baltimore. He has been a business professor and a strategic trader for more than twenty years.

As a business professor, he is well grounded in both fundamental and technical market analysis techniques. His trading experience includes trading stocks, ETFs, futures, Forex, options, and commodity futures. Dr. Keppler has traded in both U.S. and International financial markets. He possesses a unique understanding of

the interrelationships between various markets and the delicate connections that exist between various trading instruments.

In addition to his university teaching experience, Dr. Keppler has presented numerous seminars and workshops throughout the world. He has published well-received research papers and articles on technical analysis, trading methods, trading strategies, risk management and market price action theory.

Dr. Keppler has also developed a variety of proprietary strategic trading systems and indicators. Utilizing his trading knowledge and educational background, he has developed the Strategic Trading Educational Program to help guide traders and investors through the maze of financial markets. Dr. Keppler is recognized for his unique and dynamic style of teaching; he thrives on interacting and coaching his students on the path of financial success.



GLOSSARY

Ask

The ask is the price at which sellers are willing to sell in an auction. The forces of supply and demand in the market will influence the ask price at any given point in time based on market conditions. Aggressive demand in the market will usually push the seller's asking prices higher.

Auction Market

A market in which buyers place bids and sellers enter offers at the same time. A transaction only takes place in the auction market when there is an agreement on price between the buyer and the seller. The transaction typically takes place at the highest price that a buyer is willing to pay and the lowest price at which a seller is willing to sell.

Auction Point

The auction point is located at the first price that is traded above or below the initial balance for the day.

Average Volume at Price (AVAP)

The average volume at price is the average traded volume at a specific price for a given session or period of time.

B Letter Shaped Profiles

There are two letter B Profile shapes; one shape is that of the capital letter B. This capital letter shaped Profile is also described as a double distribution. The other B letter shape is that of a small letter “b”. The Profile is long and narrow at the top and wide at the bottom. This structure is usually the result of heavy selling at the top of the Profile.

Balanced Market

A balanced market is a rotational market where prices trade around a fair price.

Balanced Profile

A Profile that has an approximately equal number of TPOs above and below the point of control is considered to be a balanced Profile. A balanced Profile indicates acceptance of current value in the marketplace. Most of the trading activity is balanced around a fair price which is identified by the point of control.

Bid

The bid is the price at which buyers are willing to buy in an auction. The forces of supply and demand in the market will influence the bid price at any given point in time based on market conditions. Aggressive and abundant supply in the market will usually cause the buyers' bid prices to drop.

Buying Tail

A buying tail is a single print column that appears on the lower portion of a Profile structure. The buying tail is usually made up of three or more TPOs. It is formed as a result of aggressive buying activity that takes place once prices drop to a price level that the market participants perceive as an unfair low for the session. As aggressive buyers jump at these lows, their aggressive buying causes prices to quickly move higher towards value.

Column

Column is a term that is sometimes used to describe a series of consecutive vertical TPO prints on a Profile chart. A split Profile is typically made up of a number of different columns. Each TPO column on the Profile chart will be for a specific time period; it will have a price high, a price low, an open price, and a closing price.

Composite Profile

A composite Profile is a Profile that consists of two or more Profiles.

Delta

The delta is a term often used to describe the difference between the level of selling and the level of buying for a given trading session. The delta is calculated by subtracting the total selling volume from the total buying volume for the session. A positive delta is indicative of a bullish sentiment for the session or period, while a negative delta reflects a bearish sentiment.

Developing Range

As the market activity moves up and down within a specific range of prices during the auction market process, this activity results in a developing range of prices for the session. The range continues to develop until the market finds a fair price and begins to distribute and create a value area around that fair price.

Distribution

A distribution is the process of trading activity that takes place during an auction market. Sometimes, the term distribution is also used to describe selling activity in the market.

Double Distribution

During some trading sessions, the market starts to distribute around a certain fair price. As the session develops, the perceived fair price suddenly changes due to news, events or changes in the market. This sudden change causes the market to locate and distribute around another new fair price. This new fair price may be above or below the previous fair price on the Profile chart. In either case the market will create a new distribution around the new fair price, thus creating a double distribution for the session. If this event occurs during a trading day, the Profile structure is described as a double distribution day or a “B” shaped Profile.

Dynamic Day

A dynamic day describes a trading day during which the high or the low of the day’s range are both revisited by market activity during the day.

Ease of Movement

The ease of movement describes the ease by which price goes up or down during a directional move in the market.

Failed Range Extension

A failed range extension results when prices fail to break the range created during the initial balance.

Footprint Chart

The Footprint® chart is a proprietary type of chart that is only found in the Market Delta charting platform. The Footprint chart makes it

possible to keep track and display the net difference between buyer-initiated volume and seller-initiated volume at each price. It does this by monitoring the volume traded at the bid and ask.

Imbalanced Market

An imbalanced market is a market where prices are moving directionally, seeking a fair price for a balanced market.

Initial Balance

The initial balance is typically defined as the first two periods (letters) on the Profile chart for a trading day. Typically, these two periods account for the first hour of trading activity.

Initial Range

The initial range is the price movement from price low to price high that takes place during the first hour of trading for the day session. Frequently, the day's high or low for the session is put in place after completion of the initial range.

Initiative Buying

Initiative buying takes place in the market when market participants feel confident that market prices are undervalued and destined to move higher. Initiative buying is aggressive bullish buying activity that moves market prices higher.

Initiative Selling

Initiative selling takes place in the market when market participants feel confident that market prices are overvalued and destined to move lower. Initiative selling is aggressive bearish activity that drives market prices lower.

Inside Day

An inside day is a trading day where all of the trading activity for the

entire day takes place inside the price range of the prior trading day. It is a day of uncertainty in the market.

Ledge

A ledge is formed on a Profile chart when two or more consecutive letter columns end their range of price activity at the same price level, forming a flat ledge. If the ranges terminate at an equal high, the ledge on the Profile is formed at the top of the columns. However, if the columns end at an equal low level, the ledge is formed at the bottom of the columns.

Liquidity Data Bank (LDB)

The Liquidity Data Bank is a powerful tool for analyzing volume that is offered by the CME Group for traders. This in-depth data source reveals a detailed image of market activity. LDB is an application that summarizes and reports trade data by the Customer Trade Indicator (CTI) code and it is used by trading companies to analyze trading patterns. The CTI specifies whether a trade has been executed by a Member trading for their own account, a Clearing Firm trading for its proprietary account, a Member trading for another member, or all others. This data is currently only available for CBOT products; it is produced every 30 minutes during regular trading hours and every 15 minutes during Electronic Trading Hours.

Minus Development

A minus development is an area on the Profile structure where there has been little trading activity; it appears as an area that is underdeveloped on the chart. The most extreme type of minus development is the single print on the Profile structure.

Multi-Day Profiles

A multi-day Profile is a Profile chart that consists of a specific number of days or sessions that are combined into a single Profile.

Naked POC

A naked POC is a point of control from a previous session's Profile that has not yet traded in subsequent Profiles.

Neutral Day

A neutral day describes a Profile structure for a trading day with limited range extensions on both sides of the initial balance. Neutral days are formed as a result of market uncertainty and lack of directional conviction.

Normal Day

A normal day is a term used to describe a Profile structure that is characterized by a wide-ranging initial balance; the first two time periods of the day create a wide range. As activity develops for the day, the distribution will generally develop within the range of the initial balance. As long as there is no long-term aggressive market participation, range extensions will be limited. That is to say that the market may extend beyond the initial balance by only a small amount to the top or bottom of value, and then return back into the value area. Some normal day structures will not have any range extensions at all.

Normal Variation Day

A normal variation day is a Profile structure that is characterized by a wide, but somewhat limited initial balance. The initial balance usually represents about half of the finished Profile structure, with a range extension early in the day to create a fairly normal bell curve.

Offer

An offer is the price at which sellers are willing to sell in an auction market. It is the price that a seller offers to the buyer. It is also often described as the "ask" price. The forces of supply and demand in the market will influence the seller's offer price at any given point in time based on prevailing market conditions. Aggressive demand in

the market will usually mean that sellers can offer or ask for higher prices in the marketplace.

Open Drive

An open drive describes an event that takes place when the market opens the trading day with a strong directional drive. Prices will open and continue to move in one direction without ever breaking the open price. This usually occurs when there are aggressive and determined buyers or sellers in the marketplace.

Opening Range (OR)

The opening range is the immediate range that is created during the first 5 or 10 minutes of activity for the day. It is always contained within the range of the day's initial balance.

Open Test Drive

An open test drive occurs at the open for the day when prices move towards a direction to test a key support or resistance level.

Overnight Session

Once a trading session closes for the day in the U.S. markets, the activity that takes place in overseas markets is described as an overnight session.

P Letter Shaped Profile

A Profile structure that is shaped like the letter (P) is narrow at the lower portion and developed or wide at the top. This type of Profile structure is usually the result of short covering rallies.

Period

A specified or set increment of time or trading activity.

Pioneer Range

When price moves for the first time into a new price area where it had not previously traded during the current trading session, this initial activity is described as the pioneer range.

Point of Control (POC)

The point of control on a Profile chart occurs at the price where the most TPO activity has occurred during the session. Visually it appears as the longest horizontal line on the Profile chart.

Price Ladder

A price ladder is a stacked display of market prices on a Profile chart; the ladder can also be used to show a variety of different market information. It is also sometimes used to place and track orders.

Range

A range is the distance that a price travels from (low to high) or (high to low) during a specific period or session. A range is the entire extent of price movement from a price high or low during a specific trading session or period. The range of prices for a session is calculated by subtracting the price low from the price high for the session.

Range Extension

A range extension occurs when price activity expands and extends beyond a previously defined range.

Range High

The highest price level reached during a specific range of price activity.

Range Low

The lowest price point on a specific range of price activity.

Responsive Buying

Responsive buying occurs when prices drop to an unfair low and buyers promptly respond to it with aggressive buying activity.

Responsive Selling

Responsive selling occurs when prices rise to an unfair high and sellers promptly respond to it with aggressive selling activity.

Rotational Market

A rotational market is a market where price activity is bounded by an upper price limit and a lower price limit. Prices rotate back and forth from one side to the other. This type of price activity is also described as a balanced market.

Selling Tail

A selling tail is a single print column that appears at the top of a Profile structure. The selling tail is usually made up of three or more TPOs. It is formed as a result of aggressive selling activity that takes place once prices rise to a price level that the market participants perceive as an unfair high for the session. As aggressive sellers react to these high price levels, their aggressive selling causes prices to quickly drop lower.

Settlement Period

Prior to the conclusion of a trading session there is always a flurry of last minute activity when long-term traders and daytraders are conducting their final transactions for the session. In other words, they are settling any open positions that they may have. Those who are holding long positions may choose to settle and sell to close their open positions, while those who are holding short positions may choose to buy to cover their shorts prior to the session close. This last segment or period of the day's session is often described as the settlement period. The activity during this period can often provide

some insights about the final trader sentiments at the conclusion of the session.

Short Covering

After an extended price move to the down side, traders who were short during the move will decide to close their positions and capture their profits. This action creates what is known as a short covering rally. A short covering rally may provide fuel for a reversal to the upside; however, sometimes when there is a strong trend to the downside, markets tend to continue to move lower after the short covering rally ends.

Single Print

A single print is a series of TPO prints that appear on a Profile chart without any activity preceding or following it. Single prints may appear on the top or low end of a Profile chart as well as in the middle of a Profile structure. A single print is a portion on a Profile chart that usually represents an area of fast market activity. Price is not in balance in these areas and they are often referenced as points to look at for potential support or resistance.

Split Profile

A split Profile is a Profile chart that is split into separate columns or periods. This makes it possible to clearly see the range of prices traded for each letter column.

Spread

The difference between a bid price (what the buyer is willing to pay for an instrument, i.e. the buyer's bid) and the ask price (what the seller is asking, or what the seller is willing to accept for an instrument) is called "the spread" or "the bid-ask spread".

Time Price Opportunity (TPO)

A time price opportunity occurs every time the market trades at a new price point within a given period, each price point of activity is assigned a single TPO on the Profile chart regardless of the size or frequency of activity at the price opportunity. Each letter on a Profile chart typically represents all activity that occurred at the price opportunity during a 30-minute period. The TPOs are the building blocks for the Market Profile charts.

TPO Count

The TPO count is the total number of TPO prints or letters that are printed on a Profile chart for a given period or session. The larger the TPO count on the Profile chart, the greater the activity for the session.

Trade Facilitation

Trade facilitation describes the degree of ease for prices to move in a particular direction in the market. When trading activity increases as prices move in a particular direction it indicates that the market is facilitating trade in that direction.

Trend Day

The term trend day is used to describe a Profile chart with a strong directional movement. Typically a directional day is characterized by a narrow Profile structure that continues to extend the price range in the direction of the trend for the day.

Unfair High Price

An unfair high price is a price level that is above current value for a session and is recognized by the long-term market participants as an attractive selling point. Unfair high market prices attract responsive sellers.

Unfair Low Price

An unfair low price is a price that is below current value for a session and is recognized by the long-term market participants as an attractive buying point. Unfair low market prices attract responsive buyers.

Value Area

The value area on a Profile chart is typically calculated by tracking the number of TPOs on the Profile for a given session, and then identifying or highlighting the range of prices that included approximately 70 percent of the trading activity or TPOs on the chart. This identified price range represents the value area for the session's Profile chart. The upper price of this Value Area is considered the Value Area High (VAH). The lower price of the VA is considered the Value Area Low (VAL).

Value Area High

Once a value area is calculated and identified on a Profile chart, the upper price of this Value Area is considered the Value Area High (VAH).

Value Area Low

Once a value area is calculated and identified on a Profile chart, the lowest price level of this Value Area is considered the Value Area Low (VAL).

Virgin POC

A virgin or naked POC is a point of control from a previous session's Profile that has not yet traded in subsequent Profiles. The virgin POC can be used as a useful reference point to trade around or look for support or resistance.

Volume Bars

A bar or candlestick on a technical chart that is formed on the basis of a set level of traded volume.

Volume at Price

The total volume that is traded at a specific price level during a set period or session.

Volume Distribution

A volume distribution shows the various levels of traded volume at each price within the price range for the session. It is often displayed as a histogram on the side of a Profile chart.

Volume Histogram

A histogram display indicating the total traded volume for a specific period.

Volume Point of Control (VPOC)

The volume point of control on a Profile chart is the price level that had the greatest level of trading activity during a session. The price level that has the largest volume traded during a specified period or session. Note: The volume point of control is not always at the same price level as the POC for the session.

Volume Value Area

The volume value area is the price range for a session that includes 70 percent of the traded volume for that session.

Volume Value Area High

The volume value area high is the upper limit of the volume value area for a specific session.

Volume Value Area Low

The volume value area low is the lower limit of the volume value area for a specific session.



TRADING RESOURCE GUIDE

RECOMMENDED READING

JUST A TRADE A DAY: SIMPLE WAYS TO PROFIT FROM PREDICTABLE MARKET MOVES

by Michael Jardine

Ever think how simple life would be if you could just sit back and wait for the winning trades to come to you? Now, Michael Jardine introduces a way to turn that dream into a reality. From the author of *New Frontiers in Fibonacci Trading* come groundbreaking new trading methods presented in this brand new book, *Just a Trade a Day*.

Jardine has used his extensive background in Fibonacci theory to build an easy-to-use trading system. By combining his own Jardine Range and what he has dubbed the “Universal Chart,” he is able to find that one trade a day that all traders are looking for—and with this book, he will show you how to do the same. His trading system can be used with any instrument and in any time frame; applied right out of the box, or to complement your current trading methodology.

Item #12065907 • List Price: \$99.95

MARKETS IN PROFILE: PROFITING FROM THE AUCTION PROCESS

by James Dalton, Robert Dalton, Eric Jones

The book draws from three disparate fields to present a theory of how markets work: Market Profile, behavioral finance, and neuroeconomics. The Market Profile posits that the markets reflect a continuing auction in which the underlying dynamic of the market is to facilitate transactions. Behavioral finance posits that investors do not make rational decisions, but rather are driven by emotional factors or rely on “rules of thumb” in making decisions. Neuroeconomics emphasizes that underlying psychology of investors permeates their investment decisions.

Item #4112840 • List Price: \$65.00

STEIDLMAYER ON MARKETS: TRADING WITH MARKET PROFILE

by Peter Steidlmayer

A “market profile” presents a number of basic elements from the market in an easily understood graphic format that, when analyzed properly, can yield profitable intraday and swing trades that traditional indicators do not reveal. Steidlmayer on Markets shows readers how to find these opportunities using the innovative techniques developed by the author during his many years of trading the market. This fully updated Second Edition covers innovations in both technology and technique-and broadens the scope of “market profile” to include stocks.

Item # 626009 • List Price: \$85.00

CAPTURING PROFIT WITH TECHNICAL ANALYSIS: HANDS-ON RULES FOR EXPLOITING CANDLESTICK, INDICATOR, AND MONEY MANAGEMENT TECHNIQUES

by Sylvain Vervoort

Are you looking for a better, more consistent trading system to boost profits? How about a new indicator to bolster your current technical trading? Are you in need of a no-nonsense, practical, and profitable technical trading guide? Let Sylvain Vervoort hand you his breakthrough methods in this new book designed especially for active traders.

Vervoort's trading book is a complete reference on how to apply technical analysis for profits. It explains Vervoort's own trading style in the language of active traders: You will actually find specific answers to the all-important “where to open” and “when to close” questions. And, to help you start profiting immediately, text is limited to what you really need to know and all techniques are illustrated with an application example.

Item #6379156 • List Price: \$199.00

MARKET WIZARDS

by Jack D. Schwager

How do the world's most successful traders make millions of dollars in a year...or sometimes in just hours? Are they masters of a priceless wizardry or simply the very lucky winners in a random market lottery that allows only a few players to become fantastically wealthy? What are the secrets of their unheard-of success? Market expert Jack D. Schwager interviews top traders in a variety of markets and determines that an interesting mix of method and mental posture is largely responsible. Market Wizards takes you inside the minds of these most remarkable traders. Understand what it takes to succeed, and hear it in the words of the Market Wizards themselves.

Item #4050480 • List Price: \$17.95

STRATEGIES FOR PROFITING WITH JAPANESE CANDLESTICK CHARTS

by Steve Nison

What are Japanese Candlesticks—and why should traders use them? This DVD workshop helps you understand and master this powerful tool with high impact results. Steve Nison is the world's foremost expert on Candlesticks—and now you can benefit from his expertise in the comfort of your own home. Filmed at a unique one-day seminar he gave for a select group of traders, it's an incredible opportunity to have the foremost expert guide you to trading success.

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From the beginning student to the professional trader, our goal is to continually provide the highest quality resources for those who want an active role in the world of finance. Our products focus on strategic information and cutting edge research to give our readers the best education possible. We are at the forefront of digital publishing and are actively pursuing innovative ways to deliver content. At our Traders' Forum events, our readers get the chance to learn and mingle with our top authors in a way unprecedented in the industry. Our titles have been translated in most major world languages and can be shipped all over the globe thanks to our preferred online bookstore, TradersLibrary.com.

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